

THE TRIBE HYALOPEPLINI OF THE WORLD (HEMIPTERA: MIRIDAE)

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(With 292 text-figures)

ABSTRACT

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The present paper comprises a monographic revision of the tribe Hyalopeplini (Hemiptera: Miridae, Mirinae) with descriptions of new genera and new species. The taxa included and described are, in order: *AUSTROHYALOMA* Carvalho & Gross n.gen.—*A. collessi* Carvalho & Gross n.sp., North Queensland; *CHRYSORRHANIS* Kirkaldy—*C. daphne* Kirkaldy, Pulo Laut, Sumatra, Larat, Borneo; *C. hyalinus* (Usinger) n.comb., Saipan; *C. lineatus* Carvalho n.sp., West Irian, Larat, Hainan; *CORIZIDOLON* Reuter—*C. australiense* Carvalho & Gross n.sp., Australia; *C. dextrineatum* Dellatre, Ivory Coast; *C. notanicolle* Reuter, Mauritius; *GUIANERIUS* Distant—*G. typicus* Distant, Borneo, Philippine Is.; *GUISARDINUS* n.gen.—*G. neoguineanus* Carvalho n.sp., New Guinea; *G. solomonicus* Carvalho n.sp., Solomon Is.; which is compared with *Argenis incisuratus* (Walker), a convergent member of the Mirini from Sri Lanka; *GUISARDUS* Distant—*G. bogorensis* Carvalho n.sp., Java; *G. chinensis* Carvalho n.sp., South China; *G. cristovalensis* Carvalho n.sp., Solomon Is.; *G. fasciatus* Carvalho n.sp., Solomon Is.; *G. pellucidus* Distant, Java Malacca, Tenasserin, Burma, Vietnam, Laos; *G. strigicollis* Poppius, Mentawai, New Guinea; *HYALOPEPLINUS* n.gen.—*H. antennalis* (Distant) n.comb., New Caledonia, Loyalty Is.; *H.*

calmsensis Carvalho & Gross n.sp., Queensland; *H. cristovalensis* Carvalho n.sp., Solomon Is.; *H. fijiensis* Carvalho & Gross n.sp., Fiji; *H. malayensis* Carvalho n.sp., Laos, Sumatra, Sri-Lanka, Malay Peninsula; *H. papuensis* Carvalho n.sp., Papua-New Guinea; *H. philippinensis* Carvalho n.sp., Philippine Is.; *H. samoanus* (Knight) n.comb., Samoa; *H. solomonensis* Carvalho n.sp., Solomon Is.; *HYALOPEPLOIDES* Poppius, *H. alienus* Carvalho & Gross n.sp., Queensland; *H. australiensis* Carvalho & Gross n.sp., Queensland; *H. borneensis* Carvalho n.sp., Borneo; *H. cyanescens* Poppius, New Guinea; *H. fasciatus* Carvalho n.sp., Java; *H. maculatus* Carvalho n.sp., New Guinea; *H. neoguineanus* Carvalho n.sp., New Guinea; *H. ochraceus* Carvalho n.sp., New Guinea; *H. queenslandensis* Carvalho & Gross n.sp., Queensland; *H. rubrinoides* Carvalho n.sp., New Britain; Bismark Archipelago; *H. rubriniscus* Carvalho n.sp., New Ireland; *H. similis* Carvalho n.sp., Solomon Is.; *H. trinotatus* Carvalho n.sp., New Ireland; *HYALOPEPLUS* Stål and *ADHYALOPEPLUS* n.subgen.—*HYALOPEPLUS* (*HYALOPEPLUS*) *aneityumensis* Carvalho n.sp., Aneityum I.; *H.(H.) clavatus* Distant, Bangladesh; *H.(H.) grandis* Carvalho n.sp., Philippine Is.; *H.(H.) guamensis* Usinger, Guam I.; *H.(H.) hebridensis* Carvalho n.sp., New Hebrides; *H.(H.) kandanensis* Carvalho n.sp., New Ireland, Solomon I.; *H.(H.) malayensis* Carvalho n.sp., Malaya; *H.(H.) marquesanus* Carvalho n.sp., Marquesas Is.; *H.(H.) nigrifrons* (Hsiao) n.comb., Philippines, Indonesia, New Guinea; *H.(H.) nigroscutellatus* Carvalho n.sp., New Guinea, Philippine Is.; *H.(H.) rama* (Kirby), Sri Lanka, Sumatra, Philippines, Borneo, Java.

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Malaya; *H.(H.) rubroclavatus* Carvalho n.sp., Queensland, West Irian; *H.(H.) rubrojugatus* Carvalho n.sp., New Guinea; *H.(H.) smaragdinus* Roepke, Java, Borneo; *H.(H.) spinosus* Distant, Vietnam, Assam; *H.(H.) tongaensis* Carvalho n.sp., Tonga I., Fiji; *H.(H.) tutuilaensis* Carvalho n.sp., American Samoa; *H.(H.) vitripennis* (Stål), Java, Sumatra, Borneo, Sarawak, Philippine Is., Malaya, Palau Is., Solomon Is., Moluccas, Mariana Is., New Hebrides, Babelthaup Is., New Britain, Papua New Guinea, Bismark Archipelago, Queensland, Singapore, Indo-China, Sumatra, Vietnam, Laos; *H. HYALOPEPLUS (ADHYALOPEPLUS)* n.subgen.—*H. (A.) cuneatus* Carvalho n.sp., New Guinea; *H. (A.) lorae* Poppius, New Guinea, Queensland, New South Wales; *H.(A.) madagascariensis* Carvalho n.sp., Madagascar; *H.(A.) pellucidus* (Stål), Hawaiian Is., Marquesas Is.; *H.(A.) samoanus* Knight, Samoa; *H.(A.) similis* Poppius, New Guinea, Malaya, India, Australia, Timor, Solomon Is., Philippines Is., New Britain, Borneo, Africa; *HYALOPLECTUS* n.gen.—*H. minor* n.sp., Solomon Is.; *H. solomonicus* Carvalho n.sp., Solomon Is.; *ISABEL* Kirkaldy—*I. ravana* (Kirby), Sri Lanka, Sumatra, Philippines, Burma, Formosa, South China, New Guinea; *KOSMIOMIRIS* Kirkaldy—*K. rubroornatus* Kirkaldy, Borneo, Malaya, Philippines, Thailand; *MACROLONIUS* Stål—*M. schenklingi* Poppius, Formosa; *M. sobrinus* (Stål), Borneo, Sumatra, Malaya, Singapore; *M. superbus* Distant, Burma; *ONOMAUS* Distant—*O. elegans* Poppius, Burma; *O. lautus* (Uhler), Japan; *O. pompeus* Distant, Burma; *RAMBEA* Poppius—*R. annulicornis* Hsiao, Philippine Is.; *R. gracilipes* Poppius, Sumatra; *R. malasica* Carvalho n.sp., Malaya.

A list of genera and lists of species are included, together with keys to genera, subgenera and species. Each species is illustrated in full dorsal view and where possible also their external morphology and male genitalia. A neotype is designated for *Capsus vitripennis* Stål. The genera *Macrolonidea* Hsiao and *Euhyalopeplus* Hsiao are relegated to the synonymy of *Chrysorrhani* Kirkaldy and *Guisardus* Distant respectively. The following species names have been relegated to synonyms:—*Macrolonidea cyanescens* Hsiao (of *Chrysorrhani daphne* Kirkaldy); *Guianerius palliditarsis* Poppius (of *G. typicus* Distant); *Hyalopeplus smaragdinus rubrinus* Roepke (of *H. rama* (Kirby)); *H. amboinae* Carvalho (of *H. vitripennis* (Stål)); *H. uncariiae* Roepke (of *H. vitripennis* (Stål)); *H. bakeri* Poppius and *H. horvathi* Poppius (of *H. similis* Poppius); *H. krishna* Ballard (of *H. similis* Poppius); *Isabel beccarii* Poppius and *I. horvathi* Poppius (of *Isabel ravana* Distant); *Kosmiomiris modigliani* Poppius and *K. scutellaris* Poppius (of *K. rubroornatus* Kirkaldy).

The Australian and some of the Pacific Islands components of the tribe Hyalopeplini were written up in collaboration with Gordon F. Gross, Department of Entomology, The South Australian Museum, Adelaide. In the summary above and in the text which follows those new taxa on which we worked jointly are indicated by the use of both authors' names after the genus or species name.

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INTRODUCTION

This paper deals with the tribe Hyalopeplini (Hemiptera: Miridae) of the World and is based principally on collections assembled by the Bernice P. Bishop Museum, Honolulu, by the Wau Ecological Station, Papua New Guinea and by the British Museum of Natural History.

Type specimens and unnamed collections were also provided through the courtesy of the Zoological University Museum, Helsinki; Riksmuseum of Natural History, Stockholm; Natural History Museum, Leiden; National Natural History Museum, Budapest; American Museum of Natural History, New York; South Australian Museum, Adelaide; Australian National Insect Collection, Canberra; Department of Entomology, University of Queensland, Brisbane and by other museums or organisations, as mentioned in the text. Holotypes and other type categories are deposited in the various collections named after the descriptions.

The author wishes to acknowledge his grateful thanks to Doctors J. L. Gressitt and Wayne C. Gagné, who provided most of the material for this study and to express his appreciation to his colleagues W. R. Dolling (London); M. Meinander (Helsinki); R. C. Froeschner (Washington); I. Persson (Stockholm); T. Vásárhelyi (Budapest); P. Doesburg Jr. (Leyden); R. T. Schuh (New York); G. F. Gross (Adelaide); D. F. Waterhouse (Canberra) and T. E. Woodward (Brisbane), for the loan of material.

The greater part of work was undertaken at the National Museum, Rio de Janeiro. Most of the illustrations were made there under the author's supervision by Paulo Wallerstein, Luiz Antonio Alves Costa and Paulo Roberto Nascimento.

The Australian and some Pacific Islands material was studied jointly with my colleague Gordon F. Gross and joint authorship of new taxa is indicated in the appropriate places. Mr. Gross also kindly went through the whole manuscript and corrected the English wherever an unidiomatic or awkward expression had crept in. He also illustrated several of the Australian species.

The following abbreviations for collections have been used.

AMNH—	The American Museum of Natural History, New York.
ANIC—	The Australian National Insect Collection, Canberra.
BISHOP—	The Bernice P. Bishop Museum, Honolulu.
BMNH—	The British Museum (Natural History), London.
BUDAPEST—	Természettudományi Múzeum, Budapest.
HELSINKI—	Zoological Museum, University of Helsinki.
LEIDEN—	Rijksmuseum van Natuurlijke Historie, Leiden.
QU—	University of Queensland, Brisbane.
SAM—	The South Australian Museum, Adelaide.
STOCKHOLM—	Naturhistoriska Riksmuseum, Stockholm.
USNM—	United States National Museum, Washington.

TRIBE HYALOPEPLINI CARVALHO, 1952

Hyalopeplini Carvalho, 1951, p. 133; Carvalho, 1952, p. 38; Carvalho, 1955, p. 14; Carvalho, 1959, p. 317

This tribe was erected to include a group of genera within the subfamily Mirinae with hemelytra glassy and transparent, without or with incomplete nervures, allowing the membranous wings and abdomen to be distinctly seen from above.

The great majority of species are found in the Pacific region and show several characters in common, such as the pronotum and scutellum totally or partially rugose, rugose-punctate or coarsely punctate only; hemelytra vitreous, if not entirely then at least corium distinctly transparent, but usually the whole upper wing is transparent though the cuneus and embolium or even the clavus may be opaque in some specimens, in this case with some sparse hairs.

Type genus: *Hyalopeplus* Stål, 1870.

In previous works the genera *Iridoepplus* Bergröth, 1910 from South America and *Moroca* Poppius, 1912 from Papua-New Guinea were included in this tribe. In the present revision, however, these genera are excluded and transferred to the tribe Mirini Hahn, 1831, since they show a complete neuration on the corium and the opaque portions of hemelytra are due to structure and not to colour. *Pleurochilophorus* Reuter, 1905 from Africa was also recently studied by the author and found to have a complete neuration on the hemelytra, a character which excludes it from the tribe.

In this revision 15 genera are recognised as belonging to the tribe. Two formerly recognised genera: *Macrolonidea* Hsiao, 1944 and *Euhyalopeplus* Hsiao, 1944 are considered to be synonyms of earlier described genera and four new genera are described: *Hyaloplectus* n.gen., *Hyalopeplinus* n.gen., *Guisardinus* n.gen. and *Austrohyaloma* n.gen. The genus *Hyalopeplus* Stål, 1870 is subdivided into two subgenera: *Hyalopeplus* Stål and *Adhyalopeplus* n.subgen., based mainly on the structure of the pronotum and shape of the spiculum of the vesica of aedeagus.

List of genera included presently in the tribe:

1. *Austrohyaloma* Carvalho and Gross n.gen.
2. *Chrysorrhaniis* Kirkaldy, 1902
3. *Corizidolon* Reuter, 1907
4. *Guianerius* Distant, 1903
5. *Guisardinus* n.gen.
6. *Guidardus* Distant, 1904
7. *Hyalopeplinus* Carvalho and Gross n.gen.
8. *Hyalopeplodes* Poppius, 1912
9. *Hyalopeplus* Stål, 1870
10. *Hyaloplectus* n.gen.
11. *Isabel* Distant, 1902
12. *Kosmiomiris* Kirkaldy, 1902
13. *Macrolonius* Stål, 1870
14. *Onomaus* Distant, 1904
15. *Rambea* Poppius, 1912

Key to the genera of *Hyalopeplini* Carvalho

1. Corium with radial nervure present only apically; segment I of antenna almost twice as long as width of head; membrane with two characteristic bent fasciae apically
Isabel Distant
 Corium without nervures or median nervure complete; segment I of antenna not almost twice as long as width of head, or if so then membrane without the two fasciae mentioned above 2
2. Pronotum distinct, deep and coarsely punctate, without traces of transverse rugosities (fig. 256) 3
 Pronotum smooth, distinctly rugose transversely or with punctures intermixed with rugosities or only very finely punctulate (figs. 158, 210, 276) 7
3. Collar smooth or with several faint oblique striations 4
 Collar punctate, rugose-punctate. Rugose or transversely striate, usually wide, with medial length approximately equal to half the width of eye 5
4. Rostrum reaching the 7th or 8th abdominal segment; eyes occupying the whole sides of head; lorum strongly prominent *Kosmioniris* Kirkaldy
 Rostrum reaching the middle coxae; eyes not occupying the whole side of head; lorum normal
Austrohyaloma Carvalho and Gross, n.gen.
5. Scutellum smooth or only sparsely punctate; segment I of antenna longer than width of head
Chrysorhanis Kirkaldy
 Scutellum distinctly, densely and coarsely punctate 6
6. Humeral angles globose; head rounded posteriorly, eyes prominent; segment I of antenna incrassate subbasally; small species *Guisardinus* n.gen.
 Humeral angles not globose; head not rounded posteriorly, eyes not prominent; segment I of antenna narrowed towards base; large species *Macrolonius* Stål
7. Pronotum beset with numerous short dark bristles; first antennal segment narrowed at apical third (incrassate subbasally and at extreme apex) *Corizidolon* Reuter
 Pronotum without short black bristles; first antennal segment not noticeably narrowed at apical third 8
8. Pronotum noticeably narrowed anteriorly, collar very wide, its mesal length greater than thickness of segment I of antenna which is bent outwards; cuneus more than twice as long as wide at base *Hyaloplectus* n.gen.
 Pronotum not noticeably narrowed anteriorly or if so collar not very wide, its mesal length equal to, or less than, thickness of segment I of antenna; cuneus shorter 9
9. Pronotum and scutellum smooth (including collar) or only very finely punctulate; segment I of antenna longer than width of head (fig. 276) 10
 Pronotum and scutellum distinctly rugose, at least on median portion, with black longitudinal fasciae or spots, or when this is not the case, segment I of antenna about as long as or shorter than width of head (fig. 41, 75) 12
10. Eyes contiguous with collar; pronotum not constricted in front, strongly convex, calli obsolete; segment II of antenna slightly incrassate towards apex (fig. 23)
Guanerius Distant
 Eyes placed at middle of head; pronotum noticeably constricted anteriorly; calli prominent; segment II of antennae linear (fig. 289) 11
11. Cuneus long, more than twice as long as wide at base; body erectly pilose, mostly on scutellum; pubescence of hind tibiae shorter than width of segment; species pale yellow and brown or castaneous *Onomaus* Distant
 Cuneus short, less than twice as long as wide at base; body long and erectly pilose on pronotum and scutellum; pubescence of hind tibiae erect, as long as or longer than width of segment (fig. 288) *Rambea* Poppius
12. Head wide, rounded posteriorly, about three times wider than long, segment I of antenna incrassate subbasally; disc of pronotum coarsely rugose, humeral angles globose (fig. 41) *Guisardus* Distant
 Head only about twice as long as wide, not rounded posteriorly; segment I of antenna narrower basally; if disc of pronotum rugose then humeral angles not globose 13
13. Rugosities of pronotum present only on the black fasciae or spot of disc and scutellum; segment I of antenna very short, about as long as half the width of vertex; cuneus transparent, ochraceous, pale yellow or hyaline
Hyalopeplinus n.gen.
 Rugosities of pronotum present on the whole surface of disc intermixed with punctures not, or present only on two anterior thirds of disc; segment I of antenna about as long as width of head or if shorter, always longer half the width of vertex; cuneus usually opaque 14
14. Rugosities of pronotum occupying only the anterior two thirds, portion before hind margin finely punctate (fig. 98, 112, 113); disc noticeably constricted anteriorly, calli prominent, humeral angles rounded
Hyalopeplodes Poppius
 Rugosities of pronotum occupying the whole surface, including portion before hind margin; anterior margin of disc not noticeably constricted, calli not prominent; humeral angles usually spinously produced outwards (fig. 75, 181) *Hyalopeplus* Stål

***Austrohyaloma* Carvalho and Gross, n.gen.**

Type-species: Austrohyaloma collessi Carvalho and Gross, n.sp.

Body elongate and glabrous above. Head distinctly wider than long and virtually without a collum, in front of eyes inclined vertically, clypeus not visible from above; frons obliquely striate, projecting between antennal peduncles and broadly rounded; vertex not carinate posteriorly and with a faint longitudinal sulcus on disc between eyes. Eyes widely separated dorsally, semistylate; laterally elliptical but not reaching base of head. In lateral view clypeus not very prominent and feebly arched; gena and gula separated by a strong oblique fossa almost reaching antennal peduncle. Bucculae short but prominent and semicircular. Antennae cylindrical and long and slender, first segment as long as head and noticeably incrassated at base, second segment pilose and about twice as long as first. Rostrum reaching to middle coxae, first segment incrassated and surpassing base of head.

Pronotum with a strong collar which is not punctate but has several faint, oblique striations, calli prominent and glabrous and behind calli strongly and reticulately punctate; lateral margins

obtusely convex in region of calli, behind this nearly straight, lateral angles broadly rounded, posterior margin almost straight. Disc elevated posteriorly and sloping to region of calli and collar. Mesoscutum exposed, striolate laterally but glabrous medially. Scutellum slightly swollen and smooth, lateral margins crenulate.

Hemelytra nearly vitreous except for exocorium, clavus and cuneus which are more opaque. Underside of body with propleura punctate, mesosternum vaguely convex and medially divided, mesopleura with oblique striations and orifice of scent gland without a peritreme. All coxae relatively long, anterior pair nearly contiguous, rest of legs normal. Abdomen tapering, reaching about half length of cuneus.

Remarks: This genus is characterised by the portion of pronotum behind calli and scutellum being densely and reticulately punctate but punctations on pronotum absent from collar and calli.

Austrohyaloma appears to be most closely related to *Guisardinus* n.gen. from which it differs in having the pronotal collar almost smooth, though there are in fact three oblique striations on each side to be seen under good lighting, in having the hind margin of the pronotum not bisinuate, the scutellum not punctate and the median vein reaching the hind margin of corium. It also approaches *Kosmiomiris* Kirkaldy, 1902 which has also a smooth collar by the much shorter rostrum, by the eyes not occupying the whole side of head, and being much smaller in size.

Austrohyaloma collessi Carvalho and Gross, n.sp.
(Figs. 1-2)

Characterised by its colour and dimensions.

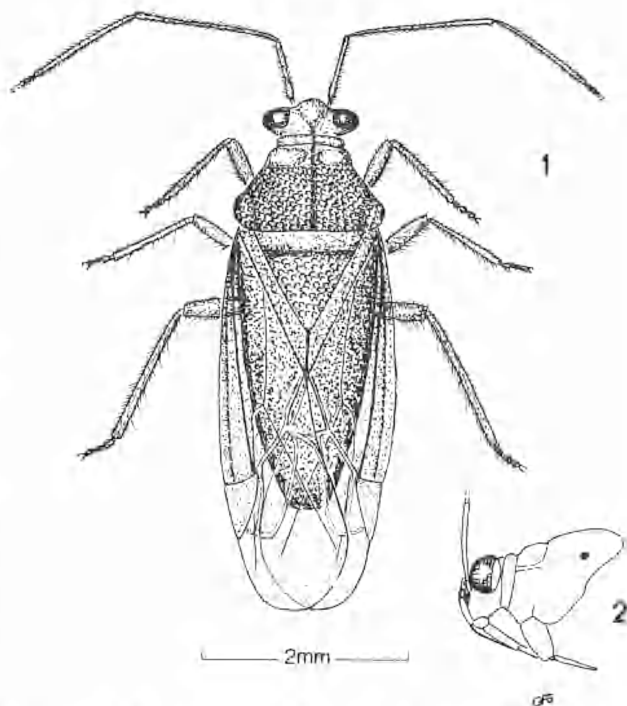
Female: Length 5.3 mm, width 1.6 mm. **Head:** Length 0.8 mm, width 1.0 mm, vertex 0.42 mm. **Antenna:** Segment I, length 0.8 mm, II, 1.6 mm; III, 1.1 mm; IV, missing. **Pronotum:** Length 1.2 mm, width at base 1.6 mm. **Cuneus:** Length 0.86 mm, width at base 0.36 mm.

General coloration light brownish yellow with a faint greenish tinge; antennae and eyes brown; disc of pronotum with a thin median longitudinal brown line and on margin of lateral angles and on posterior lateral margin of collar a blackish-brown spot. Beneath rostrum brown, rest concolorous.

Glabrous above, appendages with a fine very short and recumbent pilosity, on tibiae and tarsi mixed with long, fine erect hairs. First antennal segment swollen near base.

Underside of body sparsely and shortly pilose.

Male: Unknown.



Figs. 1-2—*Austrohyaloma collessi* Carvalho & Gross, n.sp.: fig. 1—Female, holotype; Ident. fig. 2—Lateral view of head and pronotum.

Holotype: female, NORTH QUEENSLAND; 16 km (10 mi) S of Daintree, 25.iv.1967, D. H. Colless (ANIC).

Chrysorrhani Kirkaldy, 1902

Chrysorrhani Kirkaldy, 1902, p. 226; Poppius, 1912, p. 439; Carvalho, 1959, p. 318.

Macrolonidea Hsiao, 1944, p. 372, (new synonymy); Carvalho, 1955, p. 106; Carvalho, 1959, p. 322.

Type-species: *Chrysorrhani daphne* Kirkaldy, 1902.

Body elongate; pronotum, including collar, strongly and deeply punctate, hemelytra hyaline, pubescence very short. Head wider than long, vertex short and longitudinally sulcate, immarginate, about as wide as one eye when seen from above; eyes slightly removed from anterior margin of pronotum; rostrum reaching base of intermediate coxae. Antenna linear, longer than body, segment I about as long as pronotum, segment II about twice as long as I.

Pronotum coarsely and deeply punctate, posterior lobe strongly convex, lateral margins rounded, collar wide, punctate, calli small; mesoscutum concealed; scutellum smooth, prominent, crenulate along lateral margins, apex acute.

Hemelytra hyaline, embolium slightly sinuate at middle, clavocorial and embolio-corial sutures with punctures, cuneus slightly longer than wide at base, membrane bicellulate. Propleura punctate, ostiolar

peritreme large, femora thickened before apex, tibiae minutely and sparingly spinulose, parempodia convergent at apex.

Differs from *Macrolonius* Stål, 1870 by the smooth scutellum and by the much smaller size.

Key to the species of the genus *Chrysorrhani*:

1. Apical portion of hind femora enlarged, black; size larger, about 5 mm long *daphne* Kirkaldy
- Apical portion of hind femora not enlarged, pale yellow; size smaller 2
2. Corium with a transverse dark fascia level with apex of clavus *lineatus* n.sp.
- Corium unicolorous, pale yellow to ochraceous *hyalinus* Usinger

***Chrysorrhani daphne* Kirkaldy, 1902**

Chrysorrhani daphne Kirkaldy, 1902a, p. 226; Poppius, 1912a, p. 440; Carvalho, 1959, p. 318.

Macrolonidea cyanescens Hsiao, 1944, p. 372, fig.; Carvalho, 1959, p. 322 (new synonymy). (Figs. 3-7)

Characterised by the punctuation of the body and by its colour.

Male: Length 5.2-5.9 mm, width 1.6 mm. **Head:** Length 0.4 mm, width 0.8-0.9 mm, vertex 0.28-0.30 mm. **Antenna:** segment I, length 1.0-1.2 mm; II, 2.2-2.6 mm; III, 1.7 mm; IV, 0.7 mm. **Pronotum:** Length 1.2 mm, width at base 1.4 mm. **Cuneus:** Length 0.56 mm, width at base 0.40 mm.

General coloration flavous with dark brown markings; segments II-IV of antenna dark brown, pronotum with collar laterally, calli, humeral angles and two elongate spots or a single spot in the middle of disc posteriorly, base and apex of scutellum, dark brown. Hemelytra hyaline, extreme margin of embolium, apex of corium and cuneus, veins of membrane, dark brown. Metapleura, apex of abdomen, apex of anterior tibia, apical fourth of posterior femora and third tarsal segments fuscous to black.

Morphological characters as indicated for genus.

Genitalia: Penis (fig. 4) with membranous lobes and no sclerotised spiculi. Left paramere (fig. 5) falciform, pointed, with dorsal setae. Right paramere (fig. 6-7) elongate, tapering to apex, with numerous dorsal setae.

Female: Length 5.6-6.4 mm, width 1.5-1.7 mm. **Head:** Length 0.4 mm, width 0.9 mm, vertex 0.72 mm. **Antenna:** Segment I, length 1.0-1.3 mm; II, 2.0-2.7 mm; III, 1.6 mm; IV, 0.7 mm. **Pronotum:** Length 1.3 mm, width at base 1.5 mm. **Cuneus:** Length 0.44 mm, width at base 0.36 mm. Similar to male in coloration and general aspect, slightly more robust.

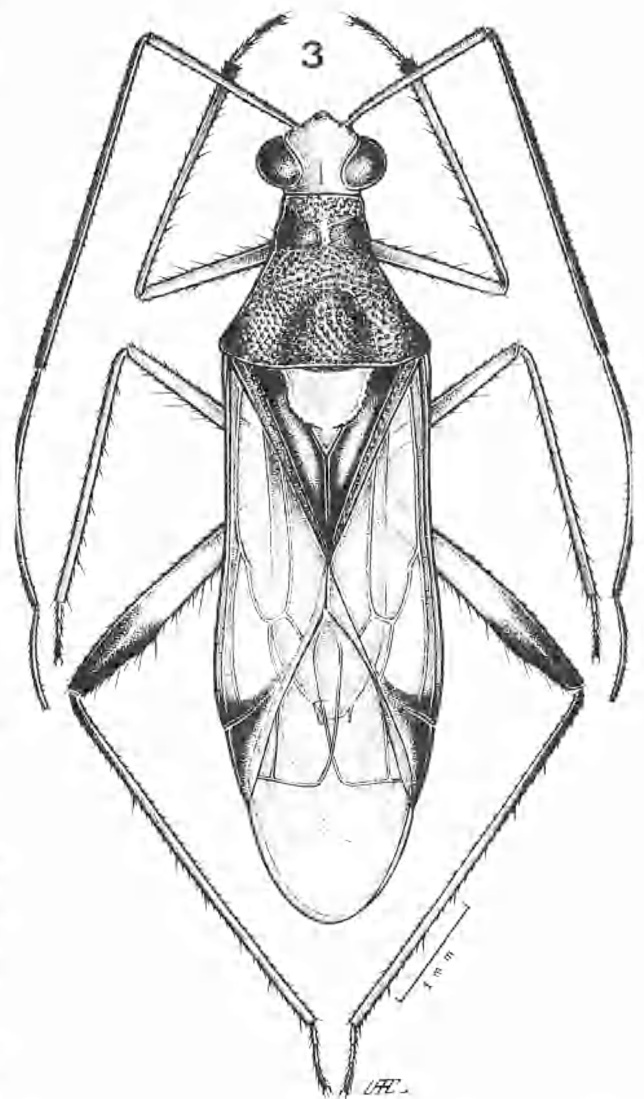


Fig. 3—*Macrolonidea cyanescens* Hsiao, male, holotype (= *Chrysorrhani daphne* Kirkaldy.)

Geographical distribution: Borneo, Sumatra, Pulo Laut and Larat Islands.

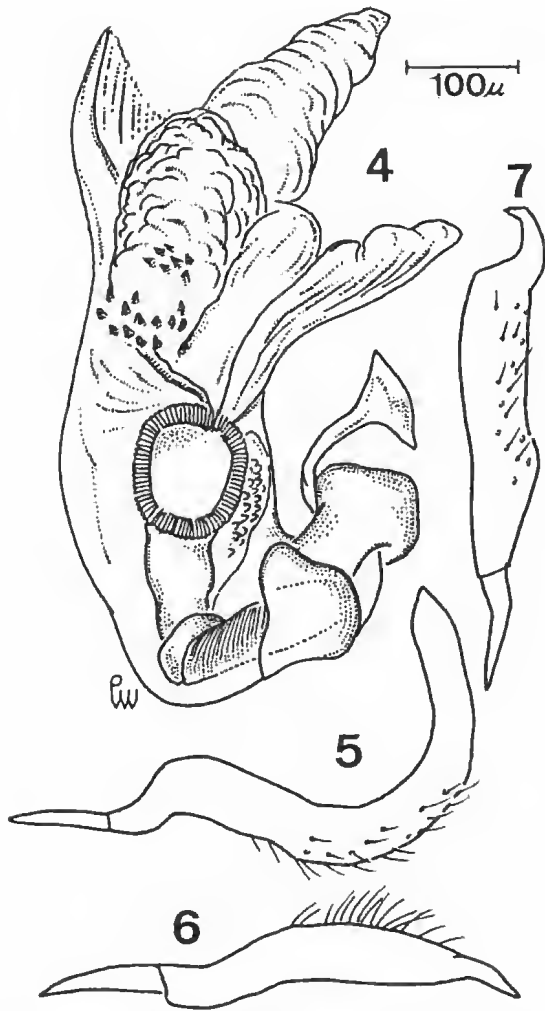
Types and specimens studied: female, holotype *Chrysorrhani daphne*, INDONESIA: Pulo Laut, J. Gribode, Col. Kirkaldy, ex-col. Montandon (HEL-SINKI); female, Benkoelen, Mocreng Lima, Sumatra, (Mus. Paris, Col. Nouàlhier, 198); male, holotype *Macrolonidea cyanescens* Hsiao; one female, Larat (Tenimbar Is.), F. Muir, in the author's collection. EAST MALAYSIA: Sandakan, Baker, 15.759 (USNM).

Remarks: Differs from *Chrysorrhani hyalinus* (Usinger, 1946) by its larger size, by the colour of pronotum and posterior femora.

***Chrysorrhani hyalinus* (USINGER, 1946), n.comb.**

Macrolonidea hyalinus Usinger, 1946, p. 60, fig.; Carvalho, 1956, p. 97, fig.; Carvalho 1959, p. 322.

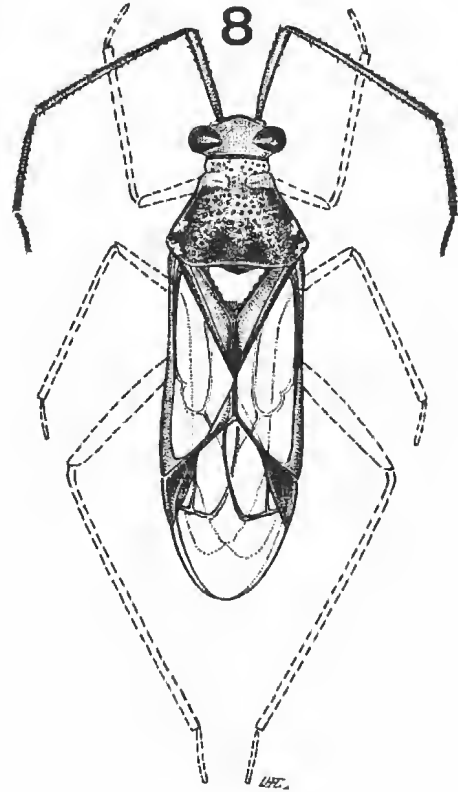
(Figs. 8-10)



Figs. 4-7—*Chrysorrhaniis daphne* Kirkaldy: Fig. 4—Penis; Fig. 5—Left paramere; Fig. 6, 7—Right paramere.

clear. Underside of body mostly pale, brown at middle of abdomen, apex of rostrum and apices of tarsi brown.

Morphological characteristics as mentioned for genus; pronotum much less narrowed anteriorly than in *daphne* Kirkaldy, scutellum not rounded laterally.

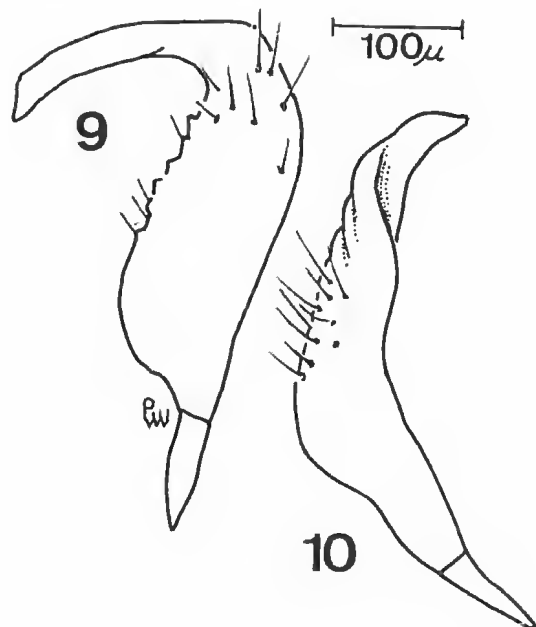


Figs. 8-10—*Chrysorrhaniis hyalinus* (Usinger): Fig. 8—Female holotype; Fig. 9—Left paramere; Fig. 10—Right paramere

Characterised by the coloration of the pronotum and by the size of the body.

Male: Length 4.2 mm, width 1.2 mm. **Head:** Length 0.3 mm, width 0.8 mm, vertex 0.32 mm. **Antenna:** Segment I, Length 0.8 mm; II, 1.6 mm; III, 0.8 mm; IV, 0.4 mm. **Pronotum:** Length 1.0 mm, width at base 1.2 mm. **Cuneus:** Length 0.44 mm, width at base 0.28 mm.

General coloration ochraceous with fulvous on head anteriorly, eyes brown, apex of second antennal segment and terminal segments (except for narrow white base of third) dark brown; pronotum with humeral angles and a fascia on either side of middle near hind margin brown; scutellum yellow with black base (mesonotum), an ill-defined brown line along middle, and apex brown. Hemelytra clear, hyaline, the inner margin of clavus broadly dark brown to black, the outer punctate margin of clavus brown, corium pale along costal margin and narrowly at apex of clavus, elsewhere along inner margin and apical margin brown, cuneus dark brown at inner base, pale along outer margin, membrane



Genitalia: Penis with membranous lobes and no sclerotised spiculi. Left paramere (fig. 9) curved, with enlarged basal portion and dorsal setae. Right paramere (Fig. 10) elongate, slender, with dorsal setae.

Female: Similar to male in coloration and general aspect. Length 4.6 mm, width 1.4 mm; vertex 0.30 mm; segment I of antenna 1.0 mm long.

Geographical distribution: MARIANA IS., Saipan, Tinian, Garapan.

Host plant: Paipay (*Guamia mariannae*).

Specimens studied: females, Saipan, 1 to 2 miles east of Tanapag, Mar. 1944, Dybas col. beating vegetation.

Differs from *Chrysorrhaniis daphne* Kirkaldy by its smaller size and by the hind femora being not enlarged apically and pale yellow. The genitalia of this species were studied from specimens in the type series.

***Chrysorrhaniis lineatus*, n.sp.**

(Figs. 11-15)

Characterised by the transverse fascia or line on the corium.

Male: Length 4.6 mm, width 1.4 mm. **Head:** Length 0.2 mm, width 0.8 mm, vertex 0.28 mm. **Antenna:** Segment I, length 1.0 mm; II, 2.2 mm; III, 1.3 mm; IV, 0.7 mm. **Pronotum:** Length 1.0 mm, width at base 1.3 mm. **Cuneus:** Length 0.48 mm, width at base 0.28 mm.

General coloration pale yellow to ochraceous with dark brown areas; eyes, apical portions of segment II of antenna, segments III-IV, and spot on humeral angles dark brown; mesoscutum and apex of scutellum fuscous; hemelytra glassy, transparent, outer and inner margins of embolium, clavus, corium and cuneus dark, a characteristic transverse fascia or line on corium level with apex of clavus; corial commissure, apex of corium and nervures of membrane dark brown, membrane hyaline. Underside of body pale yellow, a wide fascia on propleura, side of mesosternum and pleura dark brown; legs pale yellow, apex of hind femora slightly darker.

Corium finely punctulate.

Genitalia: Penis (fig. 12) with two groups of sclerotised spines and sclerotised structures around secondary gonopore (fig. 13). Left paramere (fig. 14) falciform, tapering to apical end. Right paramere (fig. 15) wider subbasally, also tapering to apex.

Female: Similar to male in colour and general aspect, the underside of body pale yellow.

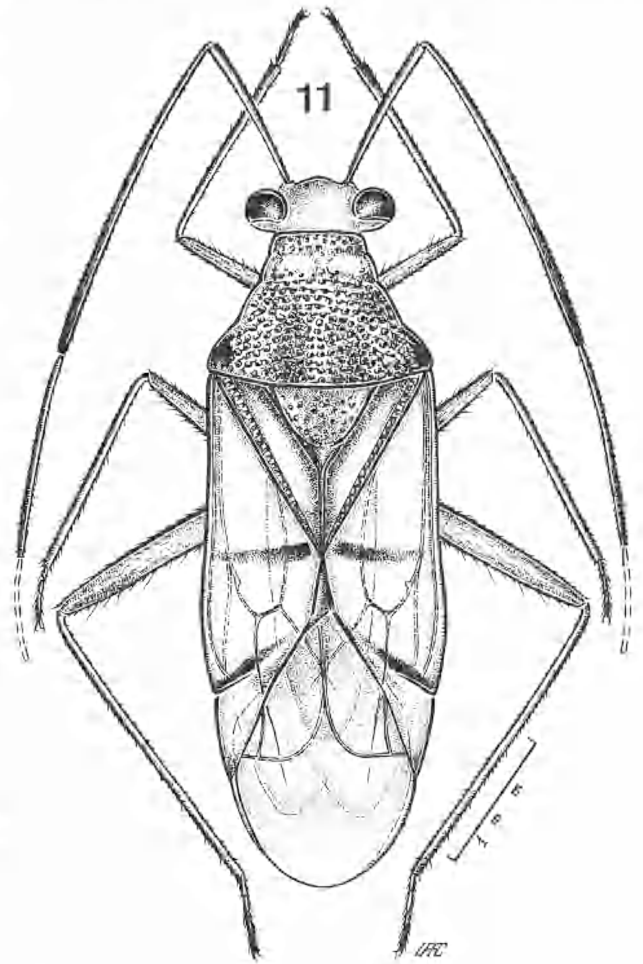
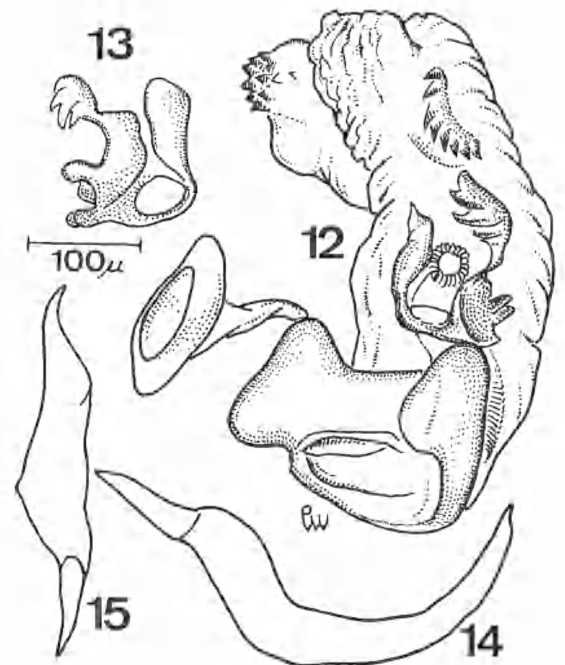


Fig. 11—*Chrysorrhaniis lineatus* n.sp.: male, holotype.



Figs. 12-15—*Chrysorrhaniis lineatus* n.sp.; Fig. 12—Penis; Fig. 13—Appendages of secondary gonopore; Fig. 14—Left paramere; Fig. 15—Right paramere.

Holotype: Male, INDONESIA: Muffin Bay, Irian Jaya, x.5.44, E. S. Ross, in the Collection of the Academy of Sciences of California, San Francisco; Larat (Tenimbar Is.) xii.47; *Paratypes*: male and female, CHINA: Ta Han, Hainan, vii.6.35, J. L. Gressitt (BM 1964-26).

This species differs from the others in the genus by the transverse dark fascia or line on corium level with apex of scutellum.

Corizidolon Reuter, 1907

Corizidolon Reuter, 1907, p.3; Poppius, 1912b, p.9; Carvalho, 1955, p.106; Carvalho, 1959, p.318.

Type-species: *Corizidolon notaticolle* Reuter, 1907.

Body elongate, pronotum, embolium and cuneus shortly setose, clavus and corium sparingly pilose. Head wider than long, frons rounded, prominent between antennal bases, vertex immarginate; eyes large, slightly removed from collar; rostrum reaching middle coxae. Antenna cylindrical, segment I narrowed on apical third, distinctly enlarged subbasally, shortly setose, about as long as width of head; segment II about two and two thirds times as long as I; segments III much shorter than II and IV much shorter than III.

Pronotum superficially rugose-punctate, collar and calli smooth, lateral margins slightly narrowed behind calli, hind margin broadly rounded; mesoscutum and scutellum smooth.

Hemelytra semihyaline and transparent, wings distinctly visible from above, embolium and cuneus setose, clavus and embolium sparingly pilose, cuneus longer than wide at base, membrane bicellulate. Legs of medium size, tibiae with minute sclerotised dots and shortly spinulose, parempodia convergent towards apices.

Differs from other genera of the tribe Hyalopeplini by the superficially rugose-punctate pronotum and by the setose hairs covering its surface.

Key to the species of the genus *Corizidolon* Reuter

1. Pronotum with six longitudinal brown vittae; rostrum reaching beyond the hind-coxae . . . *dexlineatum* Delattre
Pronotum without six longitudinal brown vittae; rostrum reaching the middle coxae 2
2. Disc with two black round spots behind calli; apex of hind femora and hind tibiae pale yellow . . . *notaticolle* Reuter
Disc without two black round spots behind calli but with two short, dark fasciae on disc of pronotum and two maculae laterally on each side; apex of hind femora and tibiae reddish-brown . . . *australiense* Carvalho and Gross, n.sp.

Corizidolon australiense Carvalho & Gross, n.sp.

(Figs. 16-21)

Characterised by the colour of pronotum and by the structure of the first antennal segment.

Male: Length 5.0 mm, width 1.5 mm. *Head*: Length 0.8 mm, width 1.0 mm, vertex 0.30 mm. *Antenna*: Segment I 0.8 mm, II-IV, missing. *Pronotum*: Length 1.0 mm, width at base 1.5 mm. *Cuneus*: Length 0.80 mm, width at base 0.40 mm.

General coloration honey to lemon coloured; first antennal segment, basal two-thirds of second antennal segment, basal third of third antennal segment, apices of hind femora and all of hind tibiae reddish-brown; apical third of second antennal segment, apical two thirds of third antennal segment, all of fourth antennal segment, terminal tarsal segments, a short scattered pilosity on the dorsal surface and a denser short pilosity on the appendages, blackish; corium, clavus and cuneus semihyaline brown; on the pronotum on either side of the midline a longitudinal brown bar and on the lateral margins of the pronotum a pair on each side of brown maculae, the posterior one of each pair at the lateral angles. In the type a pair of short parallel faint brown lines on either side of the midline of the scutellum about mid way back. The abdomen and thorax beneath with a not very dense whitish pilosity.

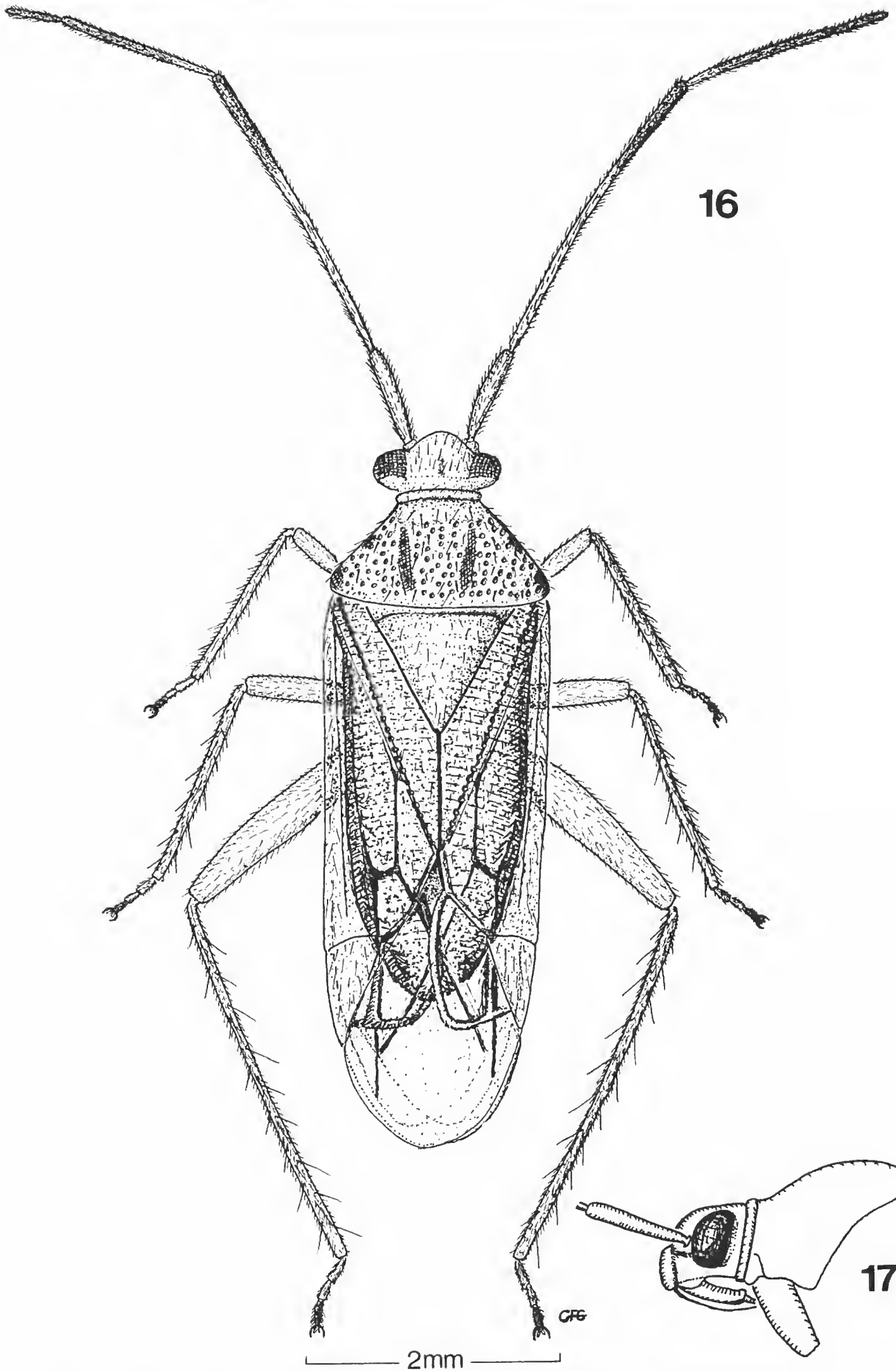
The short pilosity of the dorsal and ventral surfaces and the appendages nearly recumbent. On the tibiae also some longer erect spines, those on the fore tibiae finer and shorter than those on the other tibiae.

Genitalia: Vesica of aedeagus (fig. 18) without spiculum, with two large membranous lobes. Left paramere (fig. 19) falciform, with acute apical extremity and long dorsal setae. Right paramere (figs. 20, 21) small, less sclerotised ventrally, with long dorsal setae, anterior end acute.

Female: Length 6.6 mm, width 1.9 mm. *Head*: Length 1.0 mm, width 1.1 mm, vertex 0.47 mm. *Antenna*: Segment I, length 0.8 mm, II, 2.7 mm; III, 1.3 mm; IV, 0.5 mm. *Pronotum*: Length 1.3 mm, width at base 1.8 mm. *Cuneus*: Length 1.00 mm, width at base 0.60 mm.

General coloration and aspect similar to male. The pale brown bars on the scutellum are absent on several of the female paratypes.

Holotype: female, AUSTRALIA: Queensland: Tamborine Mountain, 15.ii.1968, F. A. Perkins (QM); paratype ♀, Lamington National Park, 19-22.v.1963, B. V. Timms; paratype ♀, Brisbane, 2.iv.1957, J. Martin; paratype ♀ and one damaged male, Bald Mountain Area, 350-1200 m (1500-4000 ft.), via Emu Vale, South East Queensland, 27-31.i.1972, B. K. Cantrell (QU); paratype ♀ (Reg. No. 120, 936), Mt. Tambourine, A. N. Lea (SAM); paratype ♀, Bunya Mts. 610 m, 22.i.1938, N. Geary; paratype ♀, Upper Broken River, Eungella.

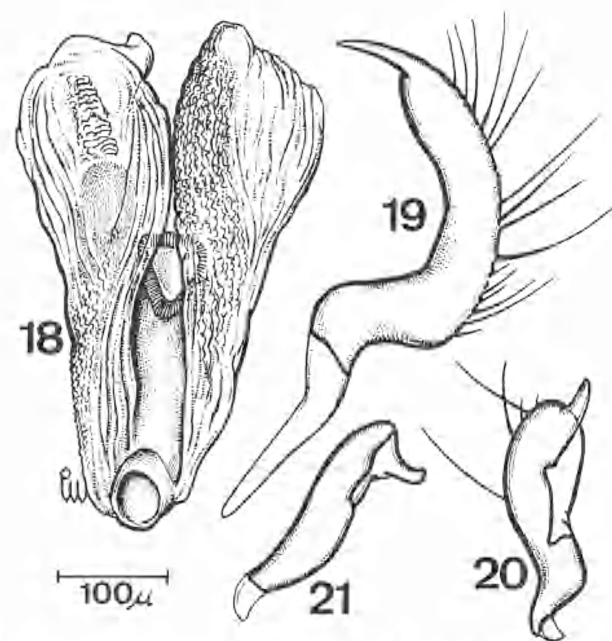


Figs. 16-17— *Corizidolon australiense* Carvalho & Gross, n.sp.: Fig. 16—Male, holotype; Fig. 17—Lateral view of head and pronotum.

12.xii.1961, McAlpine & Loss (AM). New South Wales: allotype ♂, Huon Brook near Mullumbimby, 2.iii.1965, D. K. McAlpine (AM).

The allotype is more reddish brown in appearance than the one other male specimen or the females in the series and has reddish areas anteriorly on the head below the level of the eyes, on the anterior portion of the lateral margin of the pronotum, as two spots (one above the other on the mesopleuron and metapleuron) and as a sublateral longitudinal band on the abdomen. The brown marks on the scutellum are much more strongly marked than in females and much longer.

The species differs from *Corizidolon notaticolle* Reuter, by the colour and markings of the pronotum and by the structure of the first antennal segment.



Figs. 18-21—*Corizidolon australiense* Carvalho & Gross, n.sp.: Fig. 18—Vesica of aedeagus; Fig. 19—Left paramere; Figs. 20, 21—Right paramere.

***Corizidolon dextrineatum* Delattre, 1949**

Corizidolon dextrineatum Delattre, 1949, p. 24; Carvalho, 1959, p. 318.

The author was not able to study the type and cotypes of this species, collected at Bouaké (C.I.), 27.xii.47 and 6.xii.47, attacking cotton (R. Delattre). The original description is as follows: "Conforme à la description du genre, sauf pour l'apex du rostre qui dépasse nettement l'apex des hanches postérieures, et pour les antennes dont les articles ont les longueurs relatives suivantes: I: 2, 5, II: 7, III: 6, IV: 3, 9. Les articles II, III, IV ont sensiblement le même diamètre. Une soie de chaque côté du front près des antennes.

Tête brun jaune, verdâtre à l'état frais, avec deux traits longitudinaux rougeâtres, en forme de parenthèse, sur le vertex. Yeux brun noir, granuleux, saillants. Antenne brun pâle un peu rougeâtre, avec des zones rouge brun au milieu et à l'apex de II et III. Rostre verdâtre, à apex brun noir, luisant, presque lisse, fortement rembruni vers le bord postérieur.

Thorax brun verdâtre, avec six lignes longitudinales brun rouge réparties ainsi: deux lignes médianes assez rapprochées, une ligne de chaque côté du disque, près du bord externe, et une ligne sur le milieu des pleurites. Une tache noire dans l'angle postérieur externe du pronotum. Ecusson ridé transversalement luisant, brun noir, sauf une ligne plus claire au centre, et une tache de chaque côté à la base.

Elytres transparents, à ponctuation nette, régulière, le cuneus lisse, l'aire costale vert clair sur le vivant, translucide à l'état sec, le bord commissural du clavus, surtout la base et l'apex une tache sur le bord interne et postérieur de la corie, le bord antérieur du cuneus jusqu'à la fracture, la nervure de la grande cellule, de la membrane, bruns. Une tache en V sur les bords postérieurs interne et externe du cuneus, brun rouge, de même la nervure postérieure de la petite cellule brun rouge.

Pattes jaune pâle, fémurs tachés de rougeâtre, tibias II et III vert pâle, avec des épines et des microtriches noirs, l'apex des tarsi verdâtre.

Abdomen vert pâle avec des taches rouges étendues sur les sternites."

The mention of a punctate hemelytron, rostrum reaching beyond the hind coxae and colour of body seems to exclude the species from the genus *Corizidolon* Reuter. This, however, is merely a conjecture.

***Corizidolon notaticolle* Reuter, 1907**

Corizidolon notaticolle Reuter, 1907, p. 4; Poppius, 1912b, p. 10; Carvalho 1959, p. 318.

(Fig. 22)

Characterised by the colour of the pronotum and by the type of pubescence.

Male: Length 5.0 mm, width 1.8 mm. **Head:** Length 0.4 mm, width 0.6 mm, vertex 0.18 mm. **Antenna:** Segment I, length 0.7 mm, II, 2.1 mm; III, 1.0 mm; IV, broken. **Pronotum:** Length 0.9 mm, width at base 1.5 mm. **Cuneus:** Length 0.78 mm, width at base 0.34 mm.

General coloration ochraceous to pale yellow: apex of segment II of antenna, a small spot externally on segment I, margins of collar, two

round spots behind calli on disc, two spots at humeral angles and two spots on mesoscutum externally dark brown to black; disc of pronotum with two obsolete longitudinal vittae, sutures and commissure of hemelytra, nervures of membrane, outer margin of embolium, fuscous; legs pale yellow, femora with small round dark spots, segment III of tarsi fuscous.

Morphological characters as mentioned for genus.

Genitalia: Not dissected for lack of appropriate specimens.

Female: Similar to male in colour and general aspect but slightly more robust. Length 6.2 mm, width 2.0 mm.

Geographical distribution: Mauritius Island.

Specimens studied: Male, La Réunion, Plaine des Cafres, Pilon Manuel, 27.i.1955; male, Department of Agriculture, Mauritius Island, iii.1962, C.I.E., in the author's collection.

This species is well characterised by the four round black spots on pronotum (*notaticolle*).

Guianerius Distant, 1903

Guianerius Distant, 1903, p. 269; Poppius, 1912, p. 436; Carvalho, 1955, p. 107; Carvalho, 1959, p. 318.

Type-species: *Guianerius typicus* Distant, 1903.

Body elongate, erectly pilose, pronotum very finely rugose-punctate, clavus opaque, densely pilose. Head wider than long, frons vertical, vertex marginate laterally, eyes contiguous with collar, rostrum reaching middle coxae. Antenna with segment I about as long as width of head, segment II twice as long as I, incrassate, segment III-IV short, slender. Pronotum superficially rugose-punctate, calli obsolete, collar smooth, disc convex, lateral margins rounded, hind margin straight at middle, rounded at humeral angles, erectly pubescent; mesoscutum partially covered; scutellum smooth, pilose. Hemelytra glassy, transparent (except on clavus, embolium, cuneus and black areas of corium), finely punctulate, cuneus twice as long as wide at base, clavus noticeably pilose, membrane bicellulate, apex of larger areola rounded. Ostiolar peritreme prominent, legs of medium size, hind tibiae sulcate externally, parempodia divergent towards the apices.

This genus has the general fascies of *Kosmiomiris* Kirkaldy, 1902, but differs by having the pronotum only superficially rugose-punctate and by the much shorter rostrum.

Guianerius typicus Distant, 1903

Guianerius typicus Distant, 1903, p. 269, fig. 14; Poppius, 1912a, p. 437; Carvalho, 1959, p. 318.

Guianerius palliditarsis Poppius, 1915, p. 44; Carvalho, 1959, p. 318 (new synonymy).

(Figs. 23-26)

Characterised by the colour of the body and by the rostrum reaching only the middle coxae.

Male: Length 6.2 mm, width 2.2 mm. *Head*: Length 0.6 mm, width 1.3 mm, vertex 0.56 mm. *Antenna*: Segment I, length 1.2 mm; II, 2.4 mm; III, 0.8 mm; IV, broken. *Pronotum*: Length 1.5 mm, width at base 2.0 mm. *Cuneus*: Length 0.80 mm, width at base 0.40 mm (lectotype of *palliditarsis*).

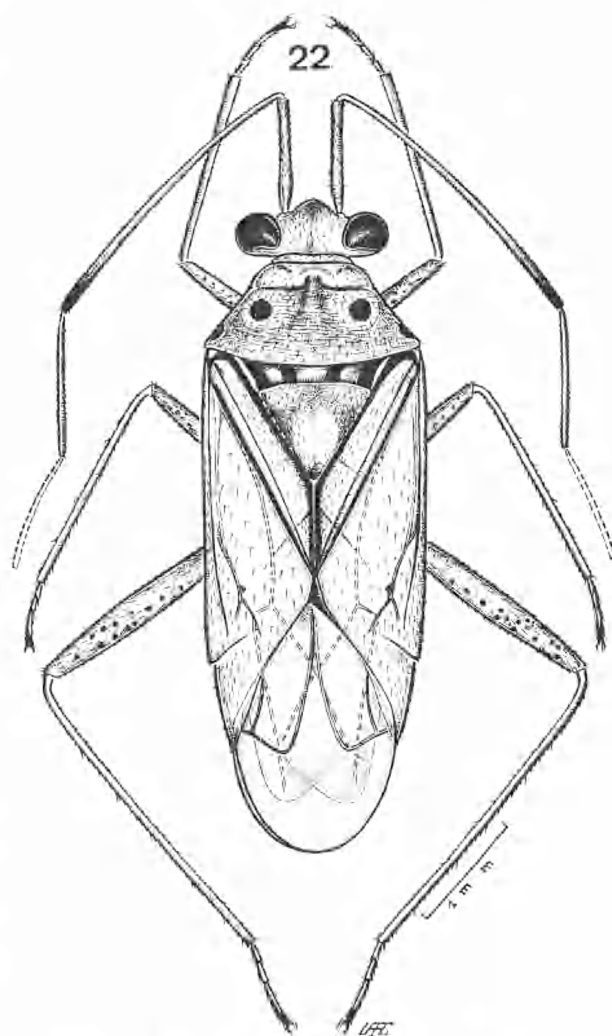


Fig. 22—*Corizidolon notaticolle* Reuter, male.

General coloration black with hyaline to citrine or lutescent areas; head and pronotum black (except hind margin, humeral angles and collar which are citrine to lutescent); antenna brownish to black; scutellum citrine, black basally; clavus black, opaque; corium hyaline, glassy, with a black

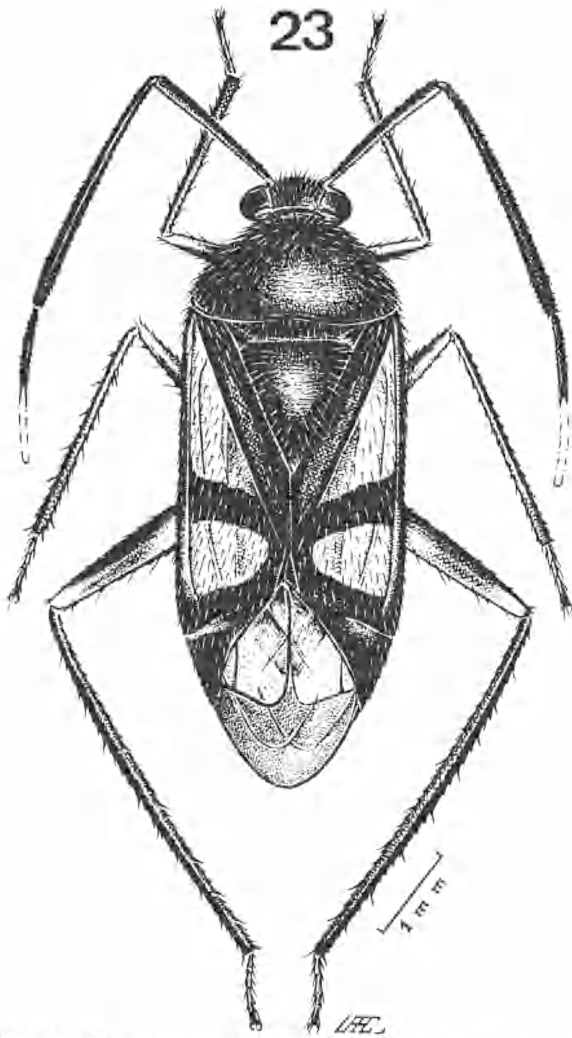


Fig. 23—*Guianerius palliditarsis* Poppius, male, holotype (= *Guianerius typicus* Distant).

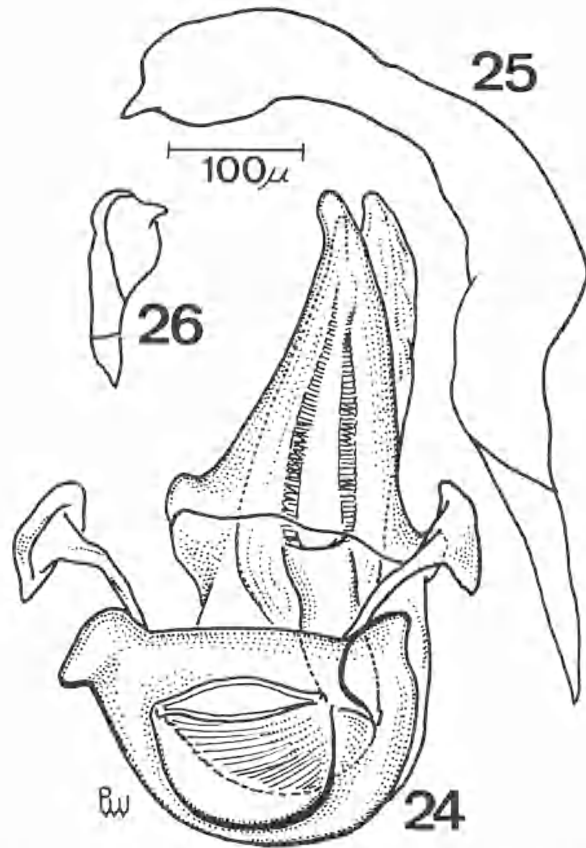
transverse fascia level with apical fifth of clavus, followed by black commissure and another oblique fascia apically, cuneus hyaline internally, tending to reddish externally; membrane fuscous on extra-areolar portion. Underside of body and inferior margin of propleura pale yellow, mesosternum, spot on metapleura, coxae totally or partially and a spot on abdomen from 5th to 9th segments (except lateral portions of tergites VI-IX which are pale) black. Legs pale, hind tibiae and segment III of tarsi brown.

Morphological characters as mentioned for genus.

Genitalia: Penis (fig. 24) with an elongate secondary gonopore, without sclerotised spiculi. Left paramere (fig. 25) large and long, with an apical acute and short point. Right paramere (fig. 26) small, as seen in illustration.

Female: Similar to male in colour and general aspect, slightly more robust. Length 7.0 mm, width 2.0 mm.

Geographical distribution: Malay Peninsula, Borneo, Philippines.



Figs. 24-26—*Guianerius typicus* Distant: Fig. 24—Penis; Fig. 25—Left paramere; Fig. 26—Right paramere.

Specimens studied: Lectotype (new designation), male, PHILIPPINES: Los Banos, Baker (*Guianerius palliditarsis* Poppius) (HELSINKI); paralectotype, male, Mt. Makiling, Luzon, Baker, (same Museum); one male and two females, EAST MALAYSIA: Bundu Tukan, 18.ii.1959, T. C. Maa (BISHOP) (compared with type).

The characters mentioned by Poppius for *palliditarsis* are within the range of variation of *typicus* Distant.

According Distant (l.c.) "hovering over flowers in jungle; flight and movements very wasp-like."

Comparing specimens of *palliditarsis* with the original drawing of Distant the author considers them as synonyms.

Guisardinus, n.gen.

Type-species: *Guisardinus neoguineanus* n.sp.

Body elongate, sparingly pilose. Head distinctly wider than long, with a short neck, vertex immarginate, slightly depressed, frons prominent, protruding in front of antennal bases, eyes semi-pedunculate, placed at middle of head, clypeus wide, rounded, buccula characteristic, rounded, Antenna cylindrical, segment I approximately as long as width of head, noticeably incrassated

towards base, with long and erect hairs, their length about as long as or longer than width of segment; segment II densely pilose, slender and approximately twice as long as first. Rostrum reaching base of middle coxae.

Pronotum deep and coarsely punctate, except at posterior margin of disc where it is finely punctulate, collar wide, distinctly rugose transversally, calli large, smooth, humeral angles prominent, globose, lateral margins rounded, hind margin bisinuate in front of scutellum, rounded at humeral angles, propleura punctate, mesosternum rugose laterally; mesoscutum largely exposed; scutellum flat, coarsely punctate, lateral margins crenulate, beset with fine and erect hairs, apex pointed, smooth.

Hemelytra glassy, transparent, finely punctulate, sparingly pilose, clavo-corial and embolio-corial commissures with a row of punctures, embolium wide, explanate; medial vein reaching to about half length of corium, cuneus about twice as long as wide at base, membrane biareolate. Legs of medium size, beset with long and erect hairs, hind tibiae with sclerotised minute tubercles and hairs about as long as width of segment, parempodia divergent towards apices.

Guisardinus is most closely allied to *Austrohyaloma* as noted under the latter. *Guisardinus* also approaches *Guisardus* Distant, 1904 but differs by having the pronotum and scutellum distinctly punctate; it differs also from *Chrysorrhais* Kirkaldy, 1902 by the punctate scutellum and distinctly rugose collar.

The species *Argenis incisuratus* (Walker, 1873) in the tribe Mirini is strongly convergent with species of *Guisardinus* and can be very easily mistaken for a member of this genus. To help distinguish *Argenis incisuratus* from the species of *Guisardinus* it has been included in the key below and redescribed immediately after *Guisardinus solomonicus*.

Key to the species of the genus *Guisardinus* n.gen.

1. Pronotum with black spots only on globose humeral angles; segment I of antenna incrassate subbasally, hemelytra with a transverse fuscous spot at corial apex
Argenis incisuratus (Walker)
- Pronotum with four black spots; segment I of antenna mostly cylindrical; hemelytra without a transverse fuscous spot at corial apex 2
2. Base of clavus infuscate; segment I of antenna with long and erect pubescence; lower margin of collar with an anterior narrow black spot *neoguineanus* n.sp.
- Base of clavus pale yellow; segment I of antenna with common medium size hairs; lower margin of collar with a posterior black fascia or spot *solomonicus* n.sp.

***Guisardinus neoguineanus* n.sp.**

(Fig. 27)

Characterised by the four dark round spots of pronotum.

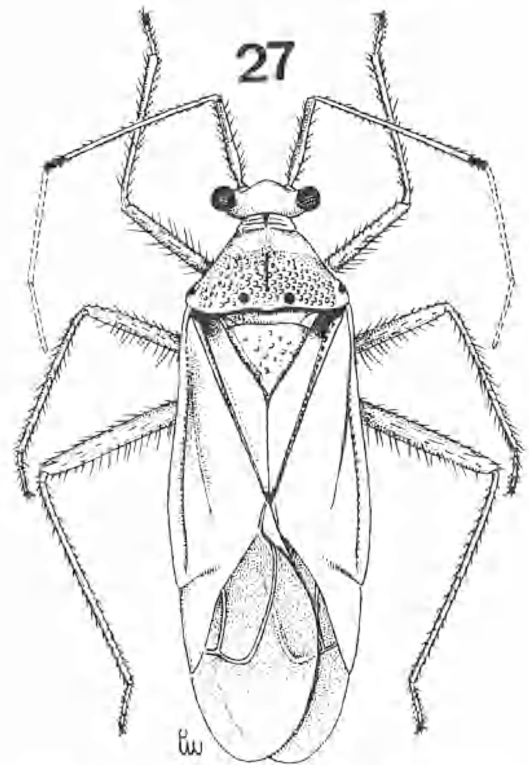


Fig. 27—*Guisardinus neoguineanus* n.sp., female, holotype.

Female: Length 6.2 mm, width 1.9 mm. *Head*: Length 0.3 mm, width 1.1 mm, vertex 0.48 mm. *Antenna*: Segment I, length 0.9 mm; II, 1.8 mm; III-IV, broken. *Pronotum*: Length 1.1 mm, width at base 1.6 mm. *Cuneus*: Length 0.08 mm, width at base 0.48 mm (holotype).

General coloration ochraceous to pale yellow; eyes, apex of second antennal segment, small longitudinal triangular vitta and small lateral spot on collar, a narrow longitudinal line on middle of disc, two roundish spots at posterior portion of disc, two others at humeral angles (one at each side) brown to black; hemelytra glassy, transparent, clavus internally at base, apex and basal angles of scutellum, apex of clavus, apex of corial commissure and a small spot at apex of corium fuscous. Underside of body and legs pale yellow, segment III of tarsi fuscous.

Morphological characters as mentioned for genus.

Male: Unknown.

Holotype: female, NEW GUINEA: NE, Eliptamin Valley, 1200-1350 m, June 19-30, 1959, W. W. Brandt (BISHOP).

Differs from *Guisardinus solomonicus* n.sp. by the colour of pronotum and mesoscutum.

Guisardinus solomonicus, n.sp.

(Fig. 28)

Characterised by the colour of pronotum and mesoscutum.

Female: Length 5.2 mm, width 1.8 mm. *Head*: Length 0.4 mm, width 1.1 mm, vertex 0.48 mm. *Antenna*: Segment I, length 0.8 mm; II, 1.6 mm; III, 1.0 mm, IV, broken. *Pronotum*: Length 1.1 mm, width at base 1.6 mm. *Cuneus*: Length 0.56 mm, width at base 0.36 mm (holotype).

General coloration ochraceous to pale yellow; eyes, antennae and two spots laterally on collar (one at each side) black; longitudinal line at middle of disc of pronotum (interrupted in middle of calli), spot at humeral angle, two roundish spots at posterior margin of disc and two others, equivalent, on mesoscutum dark brown; claval commissure, external margin of embolium and cuneus, nervures of membrane towards apex fuscous. Underside of body pale yellow, apex of clypeus, apex of buccula, anterior margin of coxal cleft I and obsolete spots on femora externally brown.

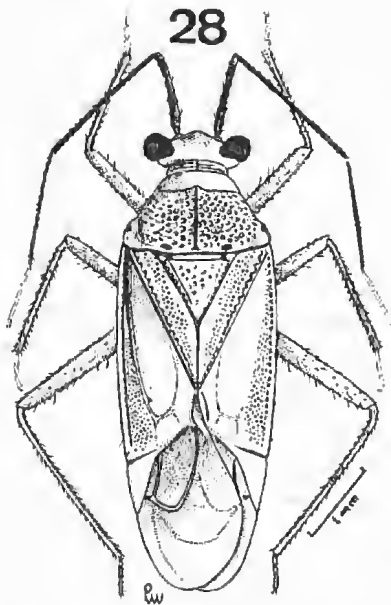


Fig. 28—*Guisardinus solomonicus* n.sp., female, holotype.

Head with flat vertex, external margin of clavus strongly crenulate, pubescence of legs noticeably long.

Male: Unknown.

Holotype: female, SOLOMON ISLANDS: NW, Malaita, Dala, 9.vi.1964, R. Straatman (BISHOP).

This species differs from *Guisardinus neoguineanus* n.sp. by colour of the antenna, pronotum and mesoscutum.

Argenis incisuratus (Walker, 1873)

(Figs. 29-33)

Characterised by the colour of the body and structure of male genitalia.

Male: Length 3.8 mm, width 1.2 mm. *Head*: Length 0.3 mm, width 0.8 mm, vertex 0.24 mm. *Antenna*: Segment I, length 0.5 mm; II, 1.5 mm; III, 1.0 mm; IV, 0.3 mm. *Pronotum*: Length 0.9 mm, width at base 1.2 mm. *Cuneus*: Length 0.40 mm, width at base 0.28 mm.

General coloration brown to fuscous with black areas; head, pronotum (except globose humeral angles which are shining black) and scutellum brown; eyes black, antenna fuscous, segment I pale; hemelytra with clavus fuscous to brown, corium pale (fuscous bordering clavus), with a large fuscous transverse spot apically which reaches outer margin of embolium, the latter and cuneus also pale with extreme margins fuscous, membrane with black nervures. Underside of body brown, legs pale yellow.

Antenna with segment I enlarged subbasally, pubescence very short, pronotum and scutellum punctate, vertex carinate, body with fine, long, erect hairs; clavo-corial and embolio-corial sutures with a row of punctures.

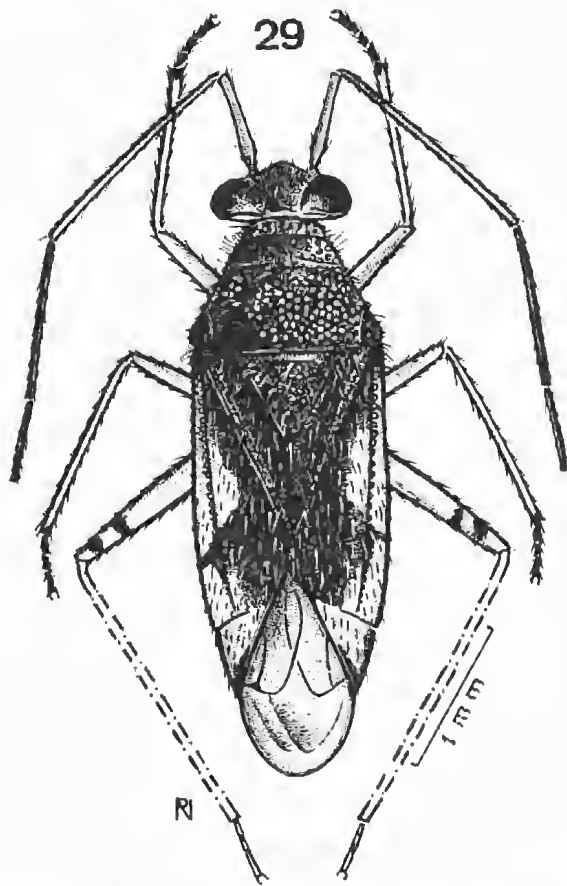


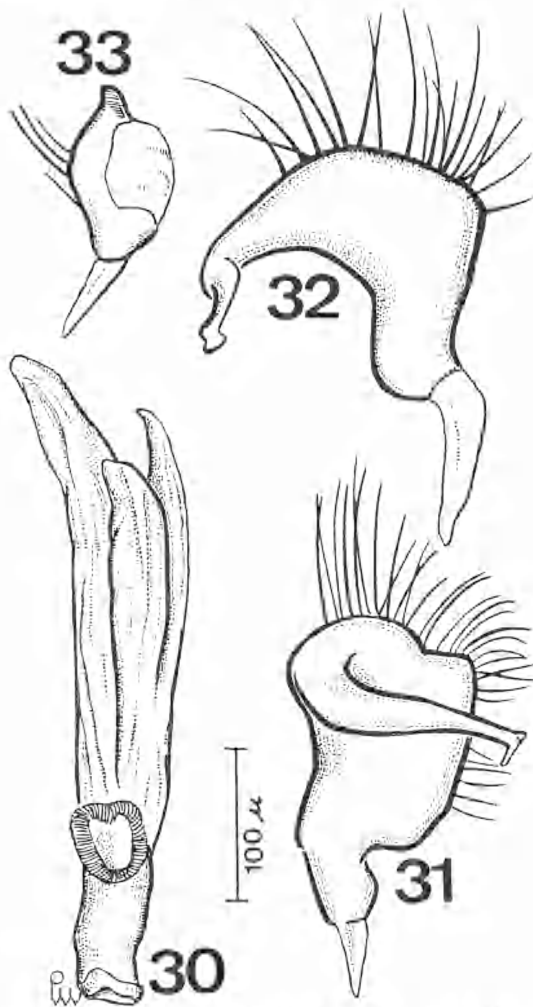
Fig. 29—*Argenis incisuratus* (Walker) n.sp., male, holotype.

Genitalia: Penis (fig. 30) with a pointed characteristic spiculum and membranous lobes. Left paramere (fig. 31, 32) enlarged basally, strongly curved, apex pointed and somewhat bifurcate at extremity. Right paramere (fig. 33) small, globose, with pointed apex.

Female: Similar to male in colour and general aspect, slightly more robust.

This species collected by our colleague Karl V. Krombein in Sri-Lanka when it was being carried in flight by a solitary crabronid wasp, *Encopognathus* sp. (Hymenoptera).

It differs from the species of *Guisardinus* by the colour of the body, structure of segment I of antenna and male genitalia.



Figs. 30-33—*Argenis incisuratus* (Walker) n.sp.: Fig. 30—Vesica of aedeagus; Figs. 31-32—Left paramere; Fig. 33—Right paramere.

Guisardinus Distant, 1904

Guisardinus Distant, 1904, p. 436; Kirkaldy, 1906, p. 134; Reuter, 1910, p. 163; Carvalho, 1952, p. 97; Carvalho, p. 107; Carvalho, 1959, p. 319.

Euhyalopeplus Hsiao, 1944, p. 370; Carvalho, 1959, p. 318 (n.syn.).

Serropeltis Poppius, 1912a, p. 425 (syn. by Knight, 1935, p. 211.).

Type-species: *Guisardinus pellucidus* Distant, 1904.

Body elongate, glabrous above; head about three times as wide as long, vertex immarginate, frons prominent between antennal bases, eyes prominent, placed at middle of head, removed from collar; rostrum reaching to intermediate coxae; antenna cylindrical, segment I incrassate at base, about as long as width of head, segment II about twice as long as I, segments III-IV slender.

Pronotum with disc coarsely, regularly and transversely rugose, a little wider than long, posterior margin slightly bisinuate before scutellum, humeral angles rounded, distinctly thickened or globose, calli large, reaching sides of pronotum; mesoscutum covered; scutellum convex, lateral margins crenulate, in some specimens only a few punctures visible on its surface.

Hemelytra glassy, hyaline, except clavus, corium and clavus without nervures, the latter with a row of punctures, cuneus longer than wide at base.

Underside of body showing a punctate propleura, ostiolar peritreme conspicuous, legs long and slender, tibiae spinulose, hind femora with a few erect setae, parempodia divergent towards apices.

This genus has the general facies of *Chrysorphanis* Kirkaldy, 1902 but differs by the distinctly rugose pronotum and globose humeral angles. Knight (1935) erroneously synonymised this genus with *Nesosylphas* Kirkaldy, 1908, a genus of the tribe Mirini Hahn, from Fiji.

Key to the species of the genus *Guisardinus* Distant

1. Scutellum black, pale apically; metapleura with a black rugose fascia medially *chinensis* n.sp.
Scutellum pale yellow, sometimes with dark punctures or dark only apically; metapleura pale yellow 2
2. Disc of pronotum with two distinct, dark, round or elongate spots 3
Disc of pronotum without distinct dark spots, sometimes infuscate medially or with a longitudinal median vitta 5
3. Posterior margin of pronotum with a round black spot, sometimes with two smaller ones at each side; spots on disc elongate *fasciatus* n.sp.
Posterior margin of pronotum without a round black spot; spots on disc rounded 4
4. Scutellum without black punctures; disc without median longitudinal dark vitta *strigicollis* (Poppius)
Scutellum with four to five black punctures; disc with a longitudinal vitta and three punctures black; pronotum with a narrow longitudinal median dark vitta *cristovalensis* n.sp.
5. Scutellum with a subapical spot followed by a narrow median longitudinal vitta and three punctures black; pronotum with a narrow longitudinal median dark vitta *bogorensis* n.sp.
Scutellum infuscate only apically, without median longitudinal vitta; pronotum with a wide longitudinal obsolete dark vitta *pellucidus* Distant.

Guisardus bogorensis, n.sp.

(Figs. 34-37)

Characterised by the coloration of scutellum and clavus, and by the structure of male genitalia.

Male: Length 6.3 mm, width 1.6 mm. *Head*: Length 0.4 mm, width 1.1 mm, vertex 0.48 mm. *Antenna*: Segment I, length 1.0 mm; II, 1.7 mm; III-IV, broken. *Pronotum*: Length 1.2 mm, width at base 1.6 mm. *Cuneus*: Length 0.72 mm, width at base 0.28 mm.

General coloration ochraceous to pale yellow; eyes and segments II-IV of antenna brown, segment I tending to pale; pronotum with a fine longitudinal median line (obsolete) and spots at humeral angles brownish to black; scutellum with three or four punctures, longitudinal line (obsolete in some specimens) and subapical portion black; clavus (except lateral margin), corial commissure, external margin of embolium, apical margin of corium, outer margin of cuneus and nervures of membrane brown. Underside of body and legs pale yellow, hind tibiae tending to brown, segments III of tarsi fuscous.

Clavus distinctly crenulate laterally, noticeably pilose.

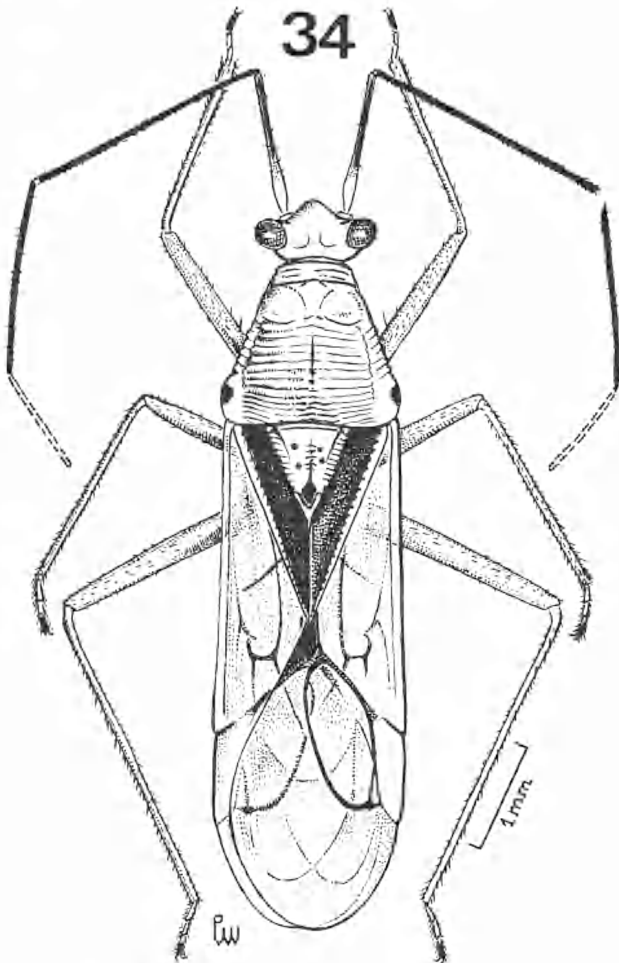
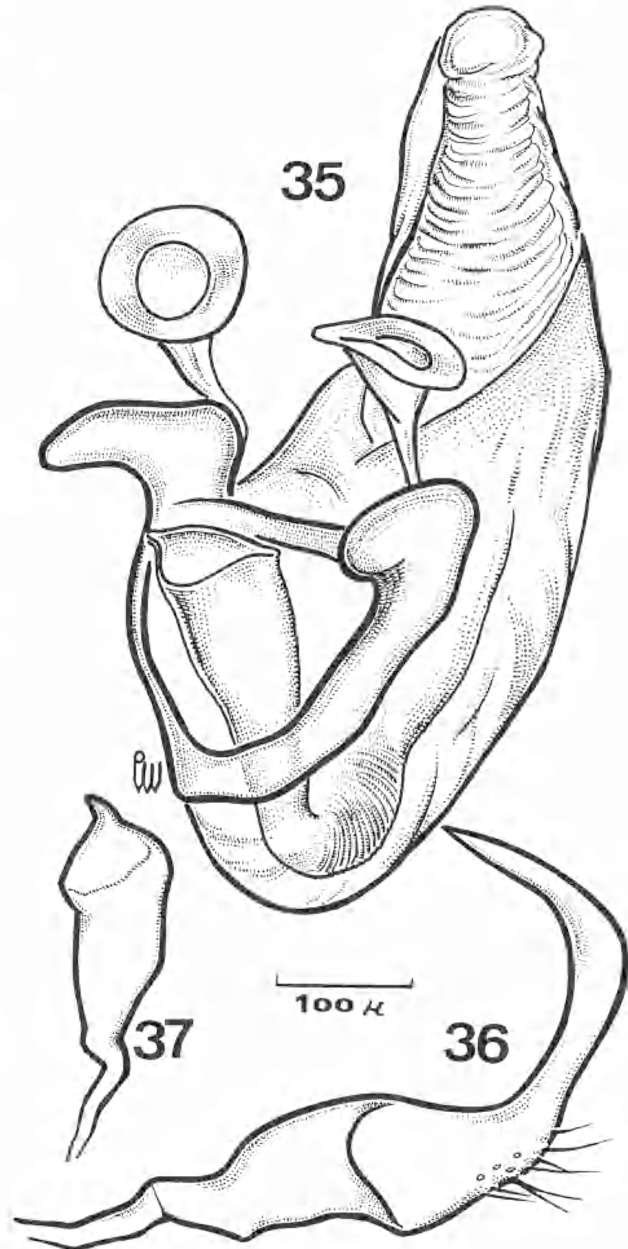


Fig. 34—*Guisardus bogorensis* n.sp., female, holotype.

Genitalia: Penis (fig. 35) with large basal plate and theca, no spiculi present. Left paramere (fig. 36) falciform, noticeably narrowed towards apex. Right paramere (fig. 37) small, pointed apically.



Figs. 35-37—*Guisardus bogorensis* n.sp.: Fig. 35—Penis; Fig. 36—Left paramere; Fig. 37—Right paramere.

Female: Similar to male in colour and general aspect. Vertex 0.56 mm, cuneus at base 0.36 mm.

Holotype: female, INDONESIA, Java, Bogor, ii.1957, O. D. Deputy (USNM). *Allotype*: male, idem. *Paratypes*: 4 females, in the Collection of the above Museum and of the author.

Differs from *pellucidus* Distant by the colour of the scutellum.

Guisardus chinensis, n.sp.

(Fig. 38)

Characterised by the colour of scutellum and by the black rugose vittae of metapleura.

Female: Length 6.4 mm, width 1.6 mm. *Head*: Length 0.6 mm, width 1.1 mm, vertex 0.56 mm. *Antenna*: Segment I, length 0.8 mm; II, 1.7 mm; III, 1.4 mm; IV, 0.7 mm. *Pronotum*: Length 1.4 mm, width at base 1.6 mm. *Cuneus*: Length 0.80 mm, width at base 0.32 mm (holotype).

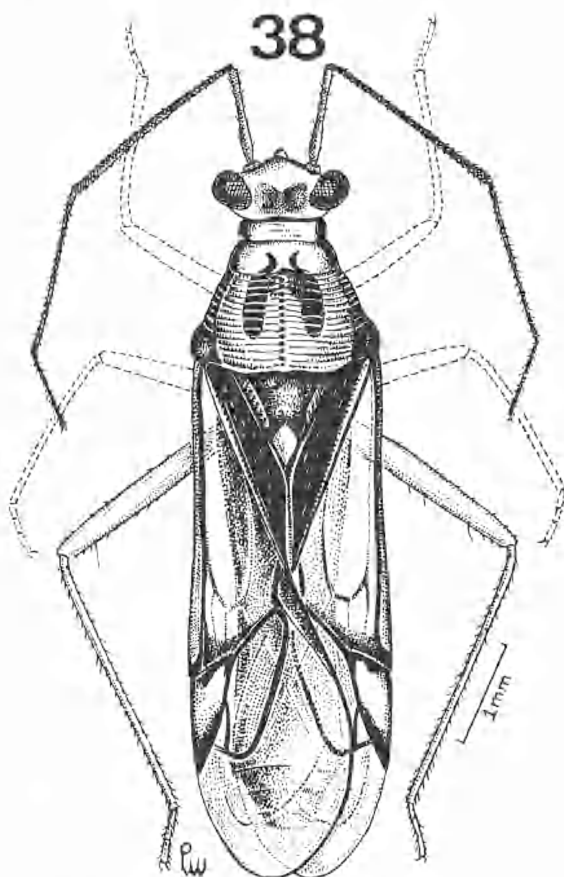


Fig. 38—*Guisardus chinensis* n.sp., female holotype.

General coloration testaceous to ochraceous with dark brown areas; head with vertex infuscate and a black spot on neck behind eye, the latter castaneous; antenna black, segment I castaneous to pale towards base; pronotum with lateral margin, two median longitudinal wide vittae and a median line which narrowly coalesce between calli, and lateral margin of collar dark brown; laterally on pronotum two longitudinal, wide, pale vittae running from collar to hind margin through calli with the two on central portion of disc, one at each side of median line, narrower; scutellum black with apex pale; hemelytra glassy, transparent, without nervures, clavus, corial commissure, apical portion of corium and embolium, apex of cuneus and nervures of membrane black. Underside of body pale yellow,

collar inferiorly, propleura (except lower margin), mesosternum, meso- and metapleura rugose, black; abdomen pale yellow, segments VIII-IX black, apex of hind femur and tibiae tending to brown, apices of tarsi fuscous.

Pronotum coarsely transversely rugose, vertex depressed at middle, posterior margin lightly marginate, segment I of antenna incrassate basally.

Male: Unknown.

Holotype: female, SOUTH CHINA: Hianan I., Sam-ah-Kong, Yei, Hsian (District), Jan. 30, 1935, F. K. To, Brit. Mus. 1964-26 (BMNH).

This species differs from others in the genus by the black scutellum and by the black rugose fascia of metapleura.

Guisardus cristovalensis, n.sp.

(Fig. 39)

Characterised by the colour of pronotum.

Female: Length 5.4 mm, width 1.5 mm. *Head*: Length 0.4 mm, width 1.1 mm, vertex 0.48 mm. *Antenna*: Segment I, length 1.0 mm; II, 1.8 mm; III-IV, broken. *Pronotum*: Length 1.1 mm, width at base 1.4 mm. *Cuneus*: Length 0.78 mm, width at base 0.28 mm.

General coloration ochraceous with dark brown to fuscous areas; eyes brown, antenna pale yellow, apex of second joint fuscous; pronotum with suture between collar and calli, a spot between the latter, two spots at lateral sides of disc, humeral angles and a narrow longitudinal fascia along its inner margin (coalescing with a black spot of lateral margin at middle of pronotum), middle of mesoscutum, basal angles and apex of scutellum, and clavus dark brown; corium glassy, transparent, outer margin of embolium, apical margin of corium, commissure, cuneal margins and nervures of membrane fuscous. Underside of body pale yellow, a longitudinal vitta on upper margin of propleura, sides of mesosternum and base of abdomen laterally dark; legs pale yellow, hind femora with small fuscous spots.

Male: Unknown.

Holotype: female, SOLOMON ISLANDS: Guadalcanal, Lame nr. Mt. Tatuve, 300 m, 18.v.1960, C. W. O'Brien (BISHOP). *Allotype*: female, San Cristoval, Kira Kira, 15.viii.1960, C. W. O'Brien.

This species differs from *strigicollis* (Poppius) by the presence of black punctures on the scutellum.

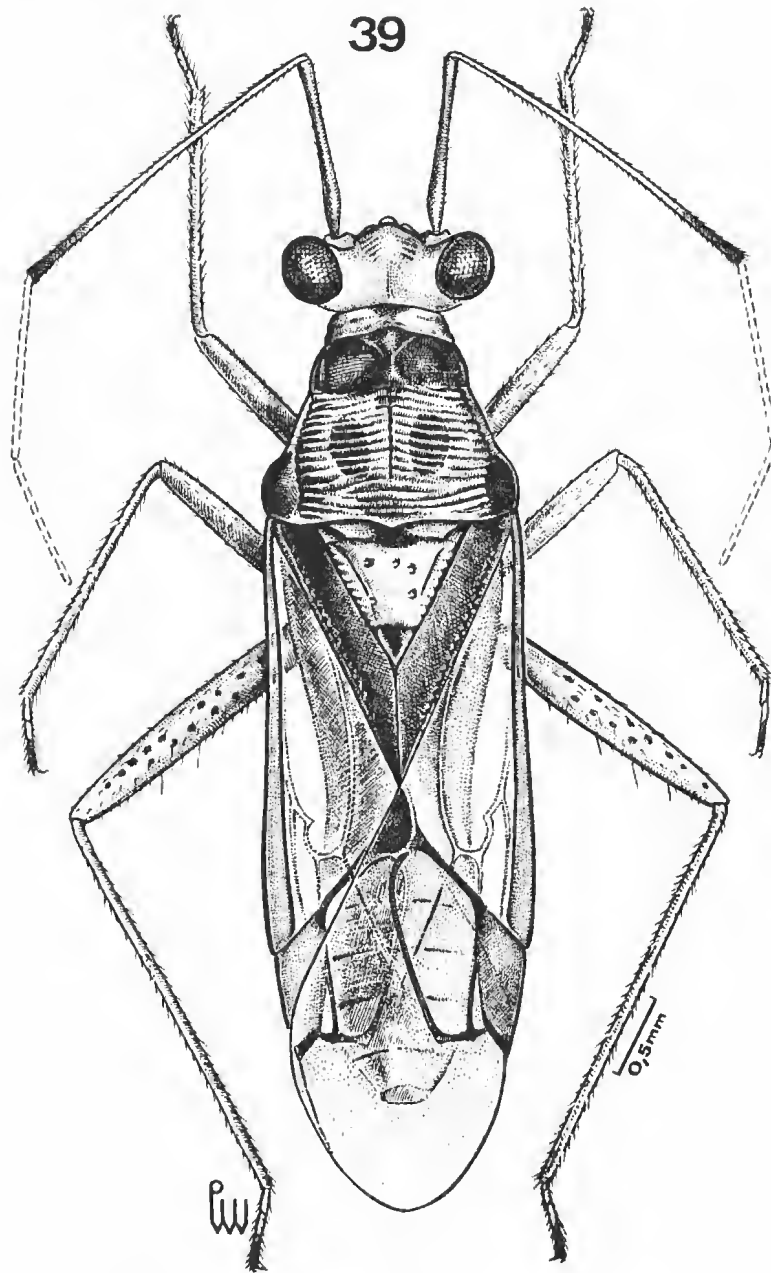


Fig. 39—*Guisardus cristoalensis* n.sp., female, holotype.

***Guisardus fasciatus*, n.sp.**

(Fig. 40)

Characterised by the colour of pronotum and collar.

Male: Length 7.4 mm, width 1.9 mm. *Head*: Length 0.4 mm, width 1.2 mm, vertex 0.56 mm. *Antenna*: Segment I, length 1.4 mm; II, 2.4 mm; III, 2.8 mm; IV, broken. *Pronotum*: length 1.4 mm, width 1.8 mm. *Cuneus*: Length 1.04 mm, width at base 0.36 mm (holotype).

General coloration ochraceous to citrine-lutescent; eyes and antennae brown, except basal portion

of segment I; a longitudinal line at middle of disc of pronotum beginning behind calli (obsolete in one specimen), two longitudinal vittae well marked at central portion of disc, lateral margin of pronotum anteriorly and outer margin of collar, a spot at globose portion of humeral angles, a median roundish spot contiguous to hind margin of disc and two small ones at either side of the latter dark brown to black; scutellum with two dark points subapically; hemelytra glassy, transparent, clavus (except external margin), outer margin of embolium and cuneus, corial commissure, apical margin of corium and nervures of membrane brownish; membrane hyaline. Underside of body ochraceous, femora with dark points externally, segment II of tarsi fuscous.

Clavus with short pubescence, pronotum strongly transversely rugose, frons with oblique striations.

Male: Unknown.

Holotype: female, SOLOMON ISLANDS: Guadalcanal, Gold Ridge, 800 m, vii.23.1956, J. L. Gressitt (BISHOP). *Paratype:* female, Buca Agric. Station, 6-10.xii.1959, J. L. Gressitt.

Differs from other species in the genus by the colour of pronotum.

Characterised by the colour of pronotum and structure of male genitalia.

Male: Length 5.6 mm, width 1.6 mm. *Head:* Length 0.4 mm, width 1.1 mm; vertex 0.48 mm. *Antenna:* Segment I, length 1.1 mm; II, 2.3 mm; III, 0.8 mm; IV, broken. *Pronotum:* Length 1.2 mm, width at base 1.4 mm. *Cuneus:* Length 0.72 mm, width at base 0.28 mm.

General coloration pale yellow to citrine with fuscous to brown areas; eyes brown, sides of neck, collar, calli and humeral angles dark fuscous to black; middle of mesoscutum, apex of scutellum, sutures of hemelytra, margins of cuneus and nervures of membrane brown to fuscous; hemelytra and membrane glassy, transparent. Underside of body pale yellow, upper margin of propleura (following margin of pronotum) with a longitudinal vitta above coxal cleft I.

Head strongly vertical, clypeus flat, eyes large, prominent, exerted, removed from pronotum by a distance approximately equal to width of collar, a short neck visible; antenna with segment I thickened basally, as long as width of head; pronotum rugose transversally, calli smooth, hind margin of disc near humeral angles slightly punctate, the latter prominent, nodulose; scutellum sparsely punctate, serrate or crenulate laterally; hemelytra glassy, transparent, corium without nervures, cuneus about three times as long as wide at base; membrane biareolate, apex of large areola rounded; pubescence of legs moderate.

Genitalia: Penis (fig. 42) without sclerotised spiculi. Left paramere (fig. 43) falciform, with a few dorsal setae. Right paramere (fig. 44) small, globose, with a more sclerotised acute apex.

Female: Similar to male in colour and general aspect but slightly more robust.

Geographical distribution: Java, Penang Island, Tenasserin Island, Burma, Laos, Vietnam.

Specimens studied: male, lectotype (new designation), BURMA, Tenass Valley, Myiita, Doherty (*Guisardus pellucidus* Distant), BMNH; female, PENINSULAR MALAYSIA, Penang Island, Straits of Malacca (Baker), holotype, *Euhyalopeplus pulchellus* Hsiao (USNM No. 56716); LAOS: Vientiane Prov. Ban Van Eue, 14.iv.1966, J. L. Gressitt; VIETNAM: Dak Song, 76 km SW of Banme Thuot, 870 m, 19.v.1960, L. W. Quate (BISHOP).

This species differs from others by the colour of pronotum and clavus.

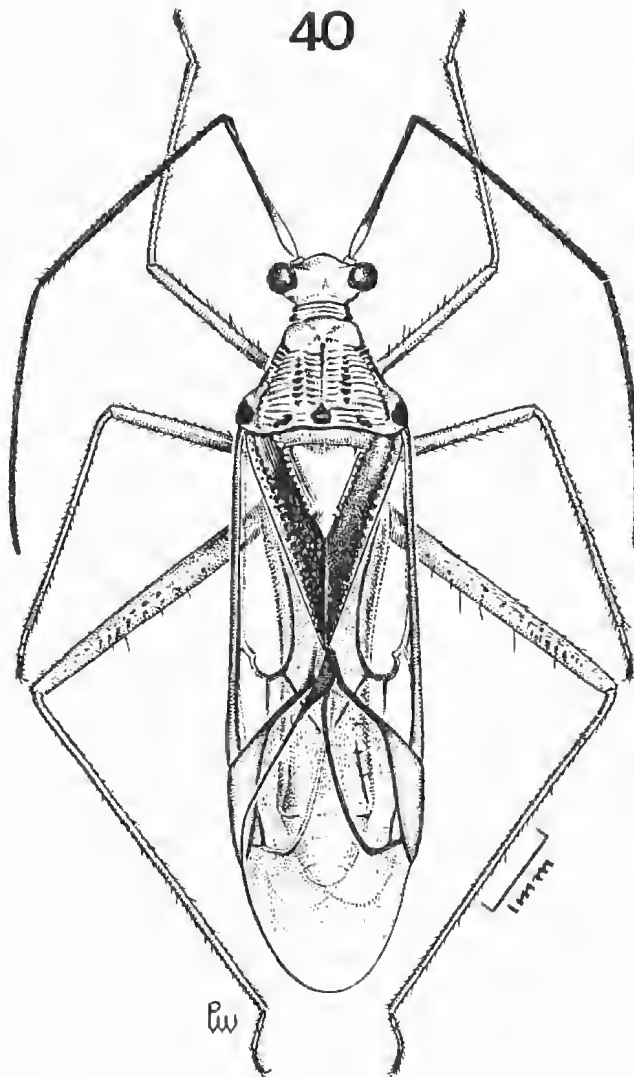


Fig. 40—*Guisardus fasciatus* n.sp., female, holotype.

***Guisardus pellucidus* Distant, 1904**

Guisardus pellucidus Distant, 1904, p. 436, fig. 281; Poppius, 1914, p. 102; Carvalho, 1952, p. 97; Carvalho, 1959, p. 319.

Euhyalopeplus pulchellus Hsiao, 1944, p. 370, fig.; Carvalho, 1959, p. 318. New synonymy.

(Figs. 41-44)

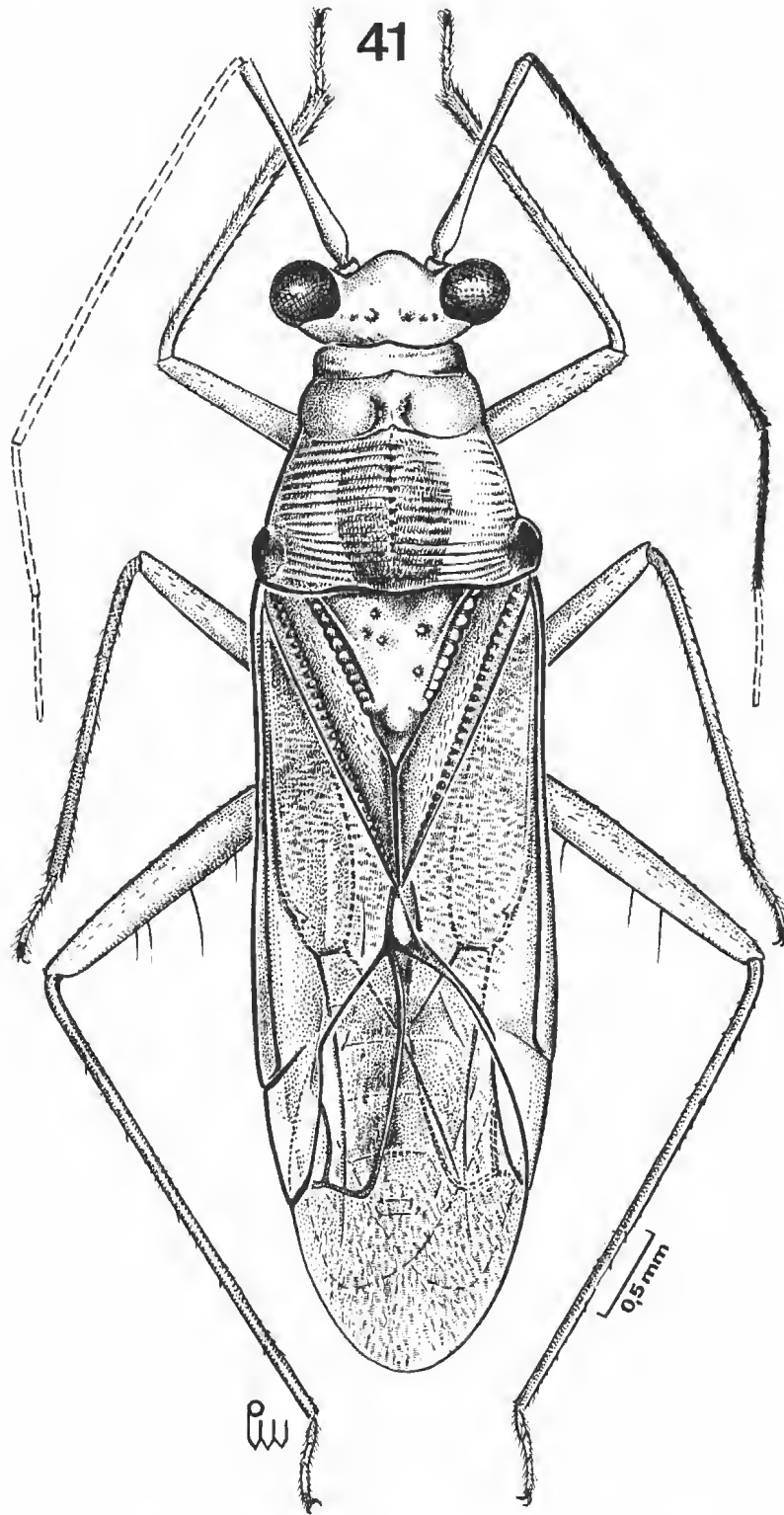
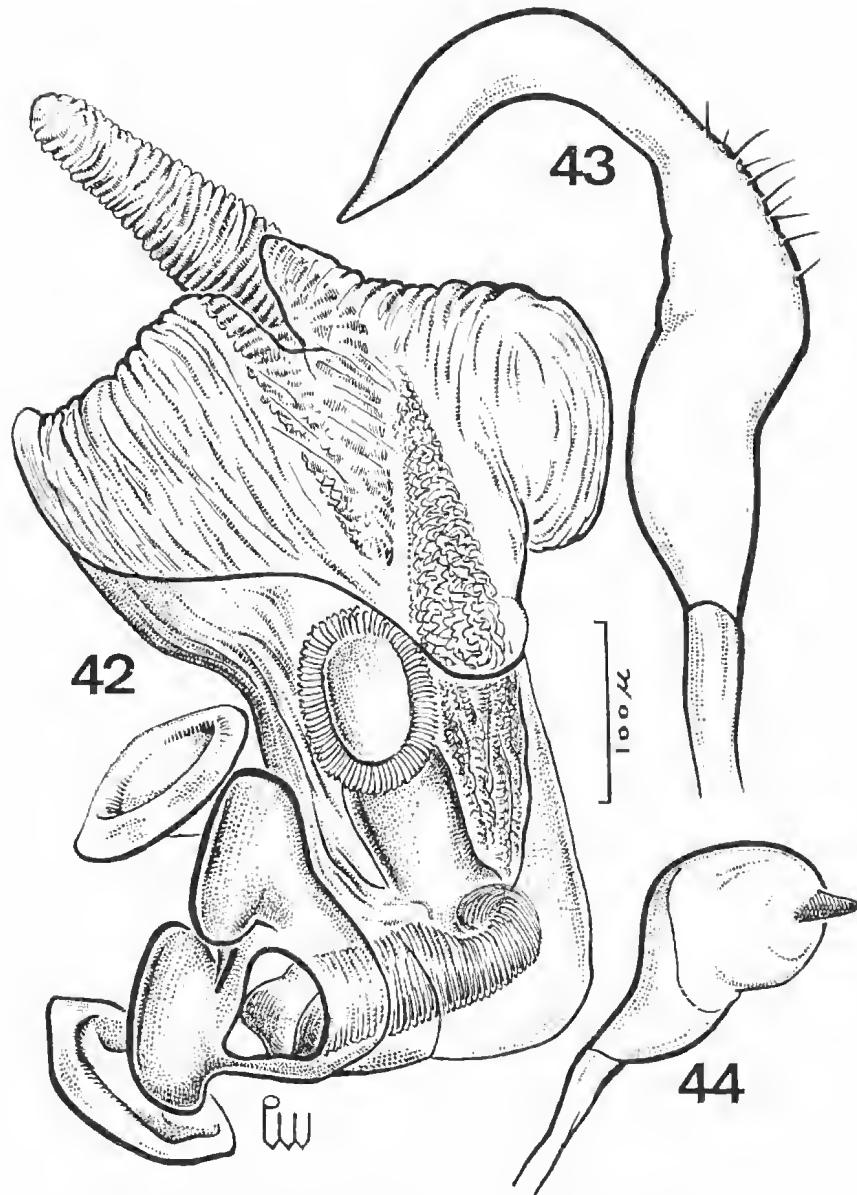


Fig. 41—*Euhyalopeplus pulchellus* Hsiao, female, holotype
(=*Guisardus pellucidus* Distant).



Figs. 42-44—*Guisardus pellucidus* Distant: Fig. 42—Penis; Fig. 43—Left paramere; Fig. 44—Right paramere.

Guisardus strigicollis (Poppius, 1912) Carvalho, 1952

Serropeltis strigicollis Poppius, 1912a, p. 425.

Guisardus strigicollis Carvalho, 1952, p. 97; Carvalho, 1959, p. 319.

(Figs. 45-48)

Characterised by the colour of pronotum and scutellum.

Male: Length 6.7 mm, width 1.7 mm. *Head*: Length 0.5 mm, width 1.3 mm, vertex 0.48 mm. *Antenna*: Segment I, length 1.2 mm; II, 2.4 mm; III, 2.2 mm; IV, 0.6 mm. *Pronotum*: Length 1.4 mm, width 1.6 mm. *Cuneus*: Length 0.88 mm, width at base 0.32 mm.

General coloration pale testaceous; head reddish brown anteriorly, vertex brown between eyes, humeral angles black, two fasciae bent outwards, fused anterior and posteriorly on disc, diluted before hind margin (forming a longitudinal vitta from hind margin of calli to anterior margin of collar), lateral margins of scutellum to apical third of clavus, propleura in large extension, mesosternum and metapleura black; inner and outer margins of embolium narrowly, apically margin of corium, inner margin of cuneus widely, outer margin of same narrowly, membrane, antennae, a vitta on each side of abdomen and apices of tarsi dark brown; segment I of antenna pale yellow with apex and base darker; femora reddish brown with fuscous dots, paler towards base.

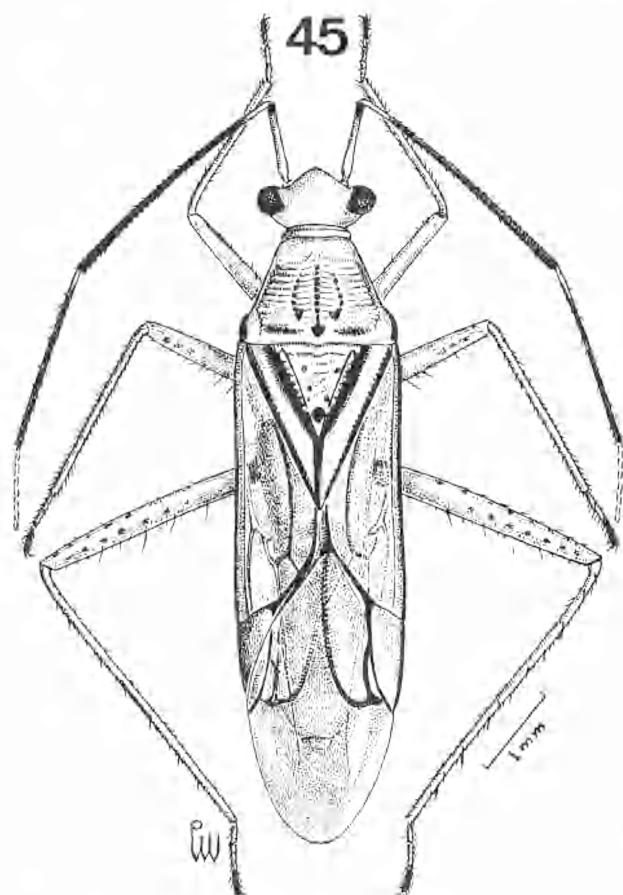


Fig. 45—*Guisardus strigicollis* (Poppius), male.

Genitalia: Penis (fig. 46) with membranous lobes and elongate secondary gonopore. Left paramere (fig. 47) somewhat enlarged sub-basally, pointed apically, Right paramere (fig. 48) short, thick, sclerotised and pointed apically.

Female: Similar to male in colour and general aspect, slightly more robust.

Geographical distribution: Mentawai Islands, New Guinea.

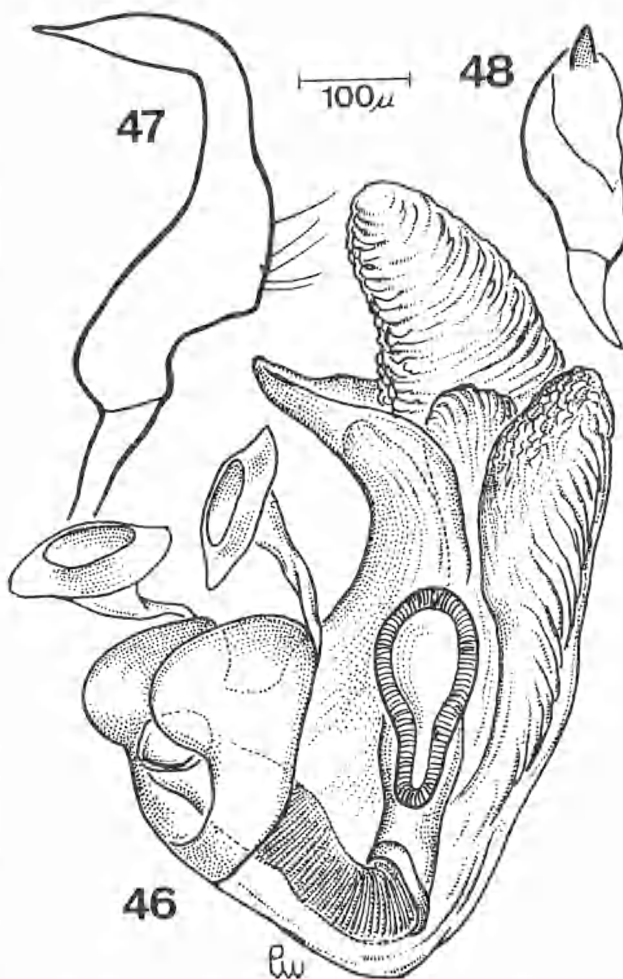
Specimens studied: NEW GUINEA, NE, W. Highlands, Bayer R. 1150 m, x.19.1958, J. L. Gressitt; INDONESIA, Bokondini, 40 km N of Baleim Val, Irian Jaya, ca 1300 m, 5.xii.1961, light trap, S. Quate and L. Quate (BISHOP).

The type of this species is mentioned by Poppius as deposited in the "Giacomo Doria" Natural History Museum, Genova. It could not be studied as this Museum does not loan types.

Hyalopeplinus, n.gen.

Type-species: *Callicralides antennalis* Distant, 1920.

Body elongate oval, mostly glabrous. Head twice as long as width, eyes prominent, continuous with anterior margin of pronotum, noticeably exerted beyond lateral margins of collar, clypeus vertical,



Figs. 46-48—*Guisardus strigicollis* (Poppius): Fig. 46—Penis; Fig. 47—Left paramere; Fig. 48—Right paramere.

Pronotum wider than long, smooth, rugose only on black fasciae or spots, collar narrow with mesal length equal to thickness of second antennal segment, calli prominent, joined medially, sinuate posteriorly, humeral angles not produced, submarginal area of disc with fine punctures, mesoscutum exposed, scutellum tumid, longitudinal vitta rugose.

Hemelytra glassy, corium and membrane transparent, embolium and cuneus opaque, sparsely pubescent, the latter about twice as long as wide at base, large cell rounded apically. Legs of moderate size, tibiae sparsely spinulose.

This genus is close to *Hyalopeplodes* Poppius, 1912 but differs by the restriction of the rugosities of the pronotum to the black fasciae of the spots on the disc; by the very short segment I of antenna, about

as long as width of vertex and by the smaller size— from 5.5 to 6.2 mm long. The anterior portion of pronotum does not show such a marked constriction and the body is more compact.

Besides the characters mentioned above the table of measurements below indicates a further sequence of characters to separate the two genera:

(mm)	<i>Hyalopeplus</i>	<i>Hyalopeplioides</i>
Length of body	5.4-6.2	6.5-9.8
Width of body	1.8-2.0	1.8-3.2
Width of vertex	0.40-0.48	0.50-0.76
Length of antenna I	0.5-0.6	0.8-1.2
Length of cuneus	0.60-0.80	0.80-1.20

These measurements were mainly based on the type specimens. It is possible that in large series there are variations which might exceed these limits.

List of species of the genus *Hyalopeplus* n.gen.

1. *antennalis* (Distant, 1920)—(as *Callicratides*).
New Caledonia and Loyalty Is.
2. *cairnensis* Carvalho and Gross, n.sp.
Australia (Queensland)
3. *cristovalensis* n.sp. Solomon Is. (San Cristoval)
4. *fijiensis* n.sp. Fiji Is.
5. *malayensis* n.sp.
Malay Peninsula, Laos, Sumatra, Sri-Lanka, Vietnam
6. *papuensis* n.sp. Papua New Guinea, New Britain
7. *philippinensis* n.sp. Philippines Is.
8. *samoanus* (Knight, 1935)—(as *Guisardus*)
Samoan Is., Society Is., New Hebrides
9. *solomonensis* n.sp. Solomon Is.

Key to the species of *Hyalopeplus* n.gen.

1. Collar to pronotum without longitudinal dark vittae or bars; disc of pronotum with a M-shaped black marking enclosing two roundish spots (fig. 79) 2
Collar of pronotum with one or more longitudinal or cross fasciae or bars; disc with a median longitudinal vitta enlarged basally and two or four black spots (one or two on each side) 3
2. Lateral arms of the M-shaped marking of disc narrow, discontinuous; mesopleura and abdomen without black, velvety ocellate spots or bars; collar mostly lutescent to orange *cristovalensis* n.sp.
Lateral arms of the M-shaped marking of disc wide and continuous; mesopleura and abdomen with black, velvety ocellate spots or bars; collar mostly black *solomonensis* n.sp.
3. Frons without a small black spot above antennal peduncle 4
Frons with a small black spot above antennal peduncle 6
4. Humeral angles with a black spot; propleura pale yellow laterally *antennalis* (Distant)
Humeral angles pale yellow or with a brown spot; propleura with a longitudinal strigose black or brown vitta 5
5. Collar with a wide lateral vitta or bar behind eye, upper portion of vitta on propleura closely approximated to the small lateral black spot of disc *cairnensis* Carvalho & Gross, n.sp.
Collar without a lower lateral vitta or bar behind eye, upper portion of vitta on propleura not approaching the small lateral black spot of disc *malayensis* n.sp.
6. Mesosternum and metapleura pale yellow; area of calli pale or mostly so *philippinensis* n.sp.
Mesosternum laterally and metapleura with black spots; area of calli mostly black 7
7. Humeral angles pale yellow; lateral portion of abdomen reddish *papuensis* n.sp.

- Humeral angles with a black spot; sides of abdominal ventrites black dorsally 8
8. Scutellum except for central black line concolorous; pygophore black *samoanus* (Knight)
Scutellum except for central black line reddish; pygophore pale to dark brown *fijiensis* n.sp.

Hyalopeplus antennalis (Distant, 1920), *n.comb.*

Callicratides antennalis Distant, 1920, p. 160.

Hyalopeplus antennalis Carvalho, 1959, p. 319.

(Figs. 49-52, 86)

Characterised by the colour of pronotum and apex of hind femur.

Male: Length 5.4 mm, width 1.8 mm. **Head:** Length 0.6 mm, width 1.2 mm, vertex 0.44 mm. **Antenna:** Segment I, length 0.6 mm; II, 2.8 mm; III, 0.9 mm; IV, broken. **Pronotum:** Length 0.8 mm, width at base 1.7 mm. **Cuneus:** Length 0.72 mm, width at base 0.40 mm (lectotype).

"Ochraceous; eyes black; antennae ochraceous, basal joint pale sanguineous, apex of second joint black, third and fourth joints black, with their bases narrowly ochraceous; pronotum with a short longitudinal black line on basal area, three spots (sometimes wanting) on the anterior collar, and the extreme basal angles black, basal marginal area more or less castaneous; margins and a central longitudinal line to scutellum, inner and outer margins of clavus, and narrow apical margins to corium black; membrane very pale ochraceous, with the venation black; body beneath and legs ochraceous, apices of the femora castaneous; corium more or less pale castaneous, with the lateral marginal areas and the cuneus very pale ochraceous; antennae with the basal joint incrassated, about as long as head, second joint longest, moderately thickened, about four times as long as first; scutellum moderately long, tumid, subdepressed, and longitudinally sulcate; femore moderately incrassated. Long. 5 mm. Hab. New Caledonia, Central District and Upper Houadou R."

Pale yellowish to citrine or ochraceous; segments I and II of antenna pale yellow to castaneous, reddish apically; vertex and inner margins of eyes with obsolete, castaneous, longitudinal vittae; eyes brown; collar with seven longitudinal bars (three median and two lower lateral running backwards on the propleura) fuscous to reddish; pronotum with a short longitudinal black vitta on middle of disc, a median slender line between calli reddish, humeral angles black; mesoscutum with two oblique fasciae and scutellum with a rugose longitudinal black vitta (not reaching apex) and lateral margins (with punctures) also black; hemelytra with claval, clavo-corial and corial sutures black; nervures of membrane fuscous; apex of hind femora reddish.

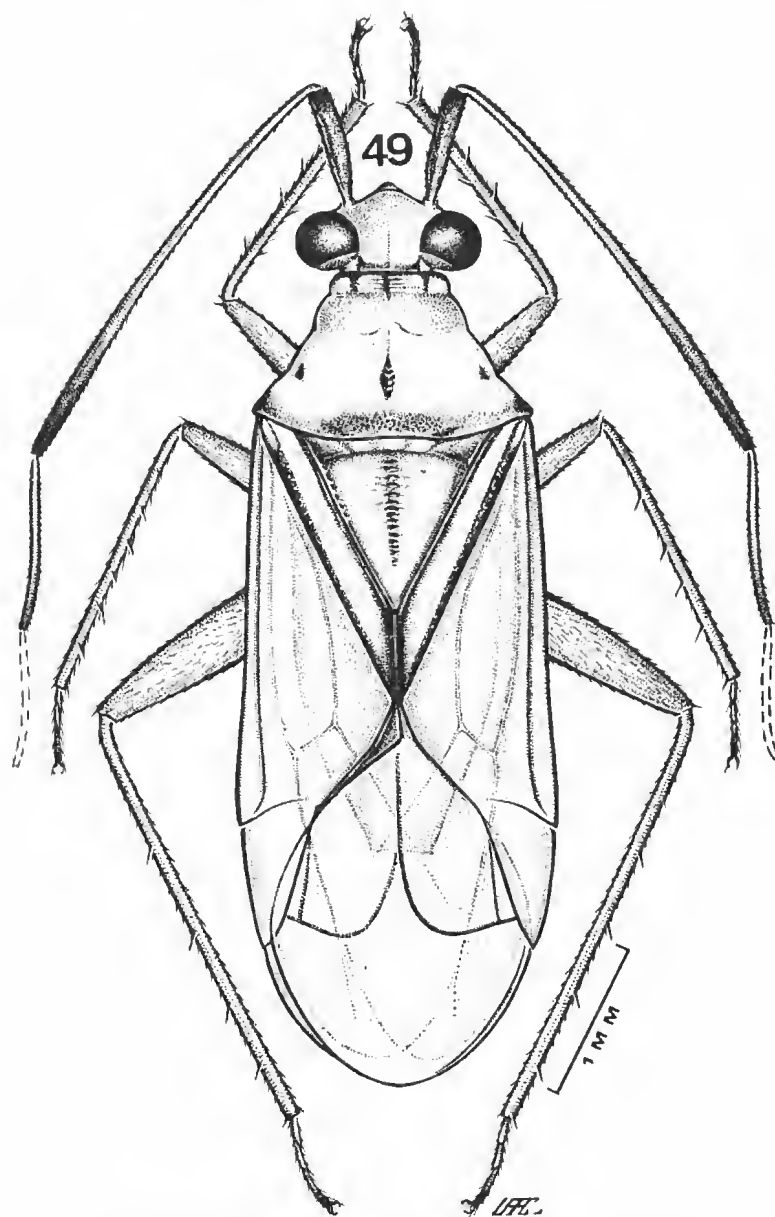


Fig. 49—*Callicratides antennalis* Distant, male, holotype
(=*Hyalopeplinus antennalis* (Distant)).

Male genitalia: Penis (fig. 50) with membranous lobes provided with minute sclerotized teeth. Left paramere (fig. 51) falciform, curved irregularly, with acute apex. Right paramere (fig. 52) small, enlarged apically, ending in a small sclerotized point.

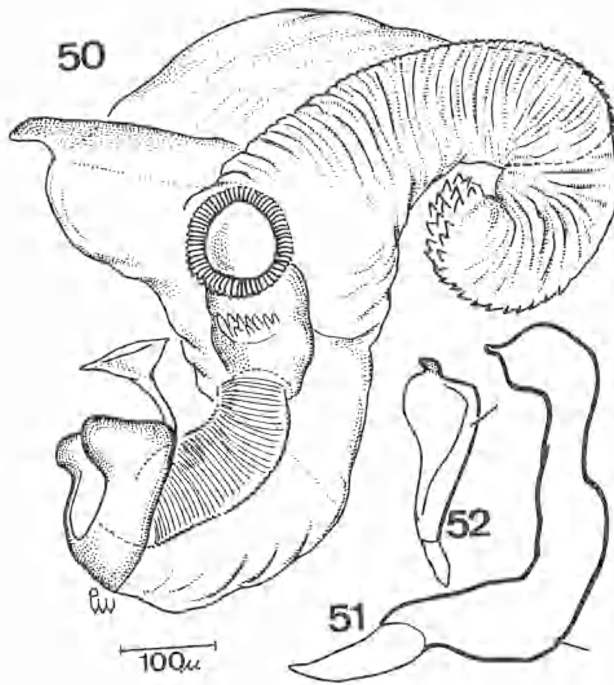
Female: Similar to male in colour and general aspect. Length 6.0 mm, width 2.4 mm.

Geographical distribution: New Caledonia.

Specimens studied: male, lectotype (new designation) from Central NEW CALEDONIA, 5.xii.1914, P. D. Montague, 1918-87 (BMNH). *Paralectotype:* male, same data as type and 52 males and females, NEW CALEDONIA: male, Gadji, 23.ix.1962, G. F. Gross (SAM); Yahoué, 12.ii.1962, N. L. Krauss; Plum, 20-60 m, 23-25.iii.1968, T. C. Maa; Pouebo,

2.i.1964, R. Straatman, light trap; St. Louis, 1950, N. L. H. Krauss; La Grouen, 150 m, 20-22.iii.1968, J. L. Gressitt; id. T. C. Maa, 15.iii.1961; Col. d'Amieu, 700-800 m, 31.iii.1968; Nouméa, v.1950, N. L. H. Krauss; Plateau de Dogmy, 1.000 m 9.iv.1969, J. L. Gressitt; Col. des Roussetes, 300-400 m, 29.i.1969; Poindimié, 50 m, i.1969; Thio, 50 m, 7.i.1969; Saraméa, 12.ii.1963; Ciu, 9.i.1969, N. L. H. Krauss; St. Louis Valley, 17.iii.1945, H. E. Miliron; LOYALTY ISLANDS: Mare I., La Roche, iii.1959, N. L. H. Krauss (BISHOP).

This species differs from others in the genus by lack of a M-shaped figure on disc; frons without a small black spot over antennal peduncle; propleura pale laterally and collar with three upper vittae.



Figs. 50-52—*Hyalopeplinus antennalis* (Distant): Fig. 50—Penis; Fig. 51—Left paramere; Fig. 52—Right paramere.

***Hyalopeplinus cairnsensis* Carvalho and Gross, n.sp.**

(Figs. 53-57, 85)

Characterised by the absence of a black spot above antennal peduncle and by the colour of collar and sternal areas.

Male: Length 6.3 mm, width 1.9 mm. **Head:** Length 0.9 mm, width 1.3 mm, vertex 0.47 mm. **Antenna:** Segment I, length 0.8 mm; II, 2.6 mm; III, 1.6 mm; IV, 1.0 mm. **Pronotum:** Length 1.3 mm, width at base 1.8 mm. **Cuneus:** Length 1.09 mm, width at base 0.47 mm.

General coloration ochraceous or honey coloured with dark areas; apex of a second antennal segment and whole of third and fourth segments and a thin longitudinal line on crown of head brown. On pronotum a central, broad, longitudinal, impressed and transversely striate line extending from anterior margin to about middle of disc of hind lobe; on either side of the expanded portion of the latter but near the lateral margins a depressed striate pit, and a spot on the lateral margins of the collar, black. A spot on each lateral angle and sometimes also a small spot on collar on either side of midline about half way to lateral margin brown. On mesoscutum a spot on either side and on scutellum a broad, tapering, longitudinal, impressed and transversely striate line medially reaching about two thirds of the way back, black. Clavus outlined with black, this black continuing along inner veins of corium for a short distance behind apex of clavus; otherwise hemelytra and wings vitreous, embolium and clavus more

opaque. Apex of rostrum black. Laterally on propleuron a blackish or brownish strigose longitudinal impressed bar, wider posteriorly than anteriorly. Mesosternum and sides of abdomen reddish or brownish orange. Legs faintly maculated with brown.

Pilosity restricted to appendages where it is short and dark and to apical portion of underside of abdomen where it is longer, sparser and pale.

Genitalia: Vesica (fig. 54) with membranous lobes and an indication of a weakly sclerotized spiculum (fig. 55). Left paramere (fig. 56) irregularly and broadly curved, apically acute. Right paramere (fig. 57) expanded before apex and with an apical tubercle.

Female: Length 6.3 mm, width 2.1 mm. **Head:** Length 0.8 mm, width 1.5 mm, vertex 0.55. **Antenna:** Segment I, length 0.8 mm, II, 2.7 mm; III, 1.5 mm; IV, 1.1 mm. **Pronotum:** Length 1.4 mm, width at base, 2.1 mm. **Cuneus:** Length 1.04 mm, width at base 0.49 mm.

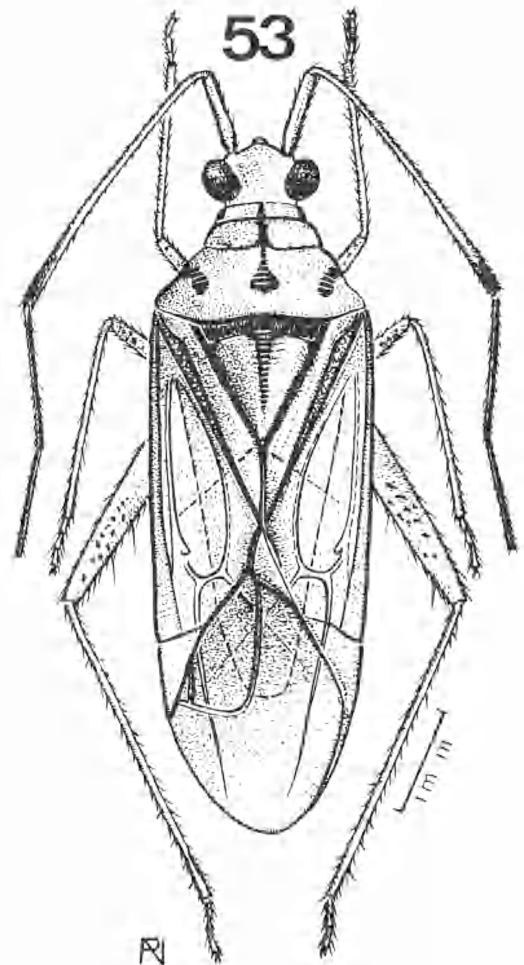
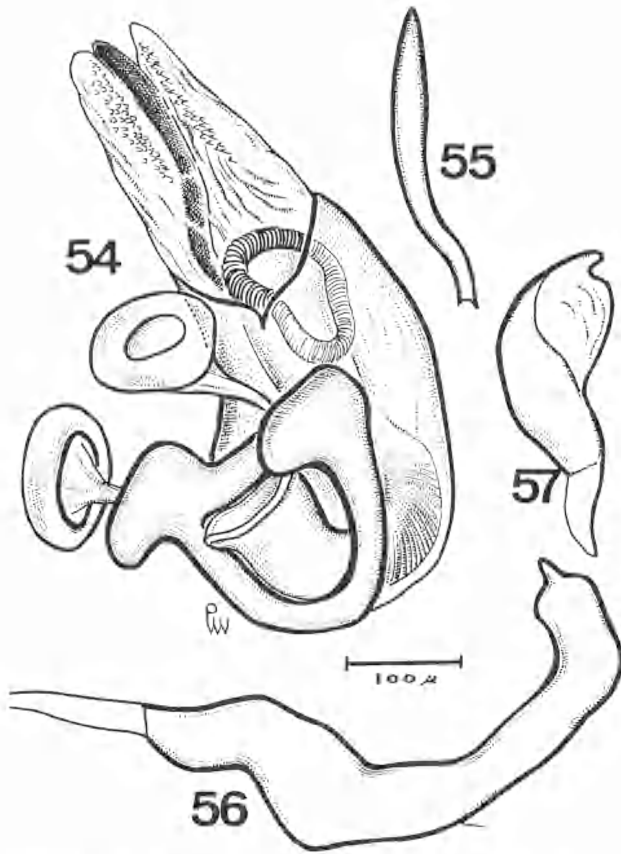


Fig. 53—*Hyalopeplinus cairnsensis* Carvalho & Gross, n.sp., male, paratype.



Figs. 54-57—*Hyalopeplinus cairnsensis* Carvalho & Gross, n.sp.:
Fig. 54—Penis; Fig. 55—Spiculum of vesica; Fig. 56—Left
paramere; Fig. 57—Right paramere.

Colour and structure as for male. In some specimens the median line on the head is quite faint, in others the two brown spots on either side of the midline of the pronotal collar are absent. The width of the orange coloration on the sides of the abdomen varies considerably.

Holotype: male, AUSTRALIA, North Queensland: (Reg. no. I20,966), paratype ♂ and 4 paratype ♀ (Reg. nos. I20,967-71), Cairns District, F. P. Dodd; paratype ♀ (Reg. no. I20,977), Cairns District, A. M. Lea (SAM); allotype ♀, 4 paratype ♂, 3 paratype ♀, Iron Range, Cape York Peninsula, 27.iv.4v.1975, G. B. Monteith; paratype ♂, same locality, 13-14.xi.1965, G. Monteith; 3 paratype ♂, same locality, 16-23.xi.1965, G. Monteith; paratype ♂, paratype ♀, Lockerbie Scrub, Cape York, 19-22.iv.1973, G. B. Monteith; paratype ♂, Churchill Creek, Mt. Lewis Road, via Julatten, 27.xi.1965, G. Monteith (QU); 4 paratype ♂, 2 paratype ♀, Dunk Island, Aug. 1927, H. Hacker; 1 paratype ♂, 1 paratype ♀, to light, Little Cedar Creek, Mt. Spec, 1.ii.1965, E. Dahms (QM); paratype ♀, Finch Hatton Gorge, 29.i.1975, B. K. Cantrell, Dept. Prim. Industries, Brisbane; paratype ♂, Iron Range, 11.iv.1964, I. F. B. Common & M. S. Upton (ANIC); Lockerbie, N. Cape York, Jan. 1958,

Darlington col. (BNMH); N. Queensland, Redlynch, 14.ii.1938, Papuan-Australian Archbold Exp., BM. 1947-448.

This species differs from *Hyalopeplinus malayensis* n.sp. by having the collar without a lower lateral vitta or bar behind eye and by the vitta of propleura fused to a small lateral black spot on disc.

***Hyalopeplinus cristovalensis*, n.sp.**

(Figs. 58-61, 89)

Characterised by the colour of pronotum and by the structure of male genitalia.

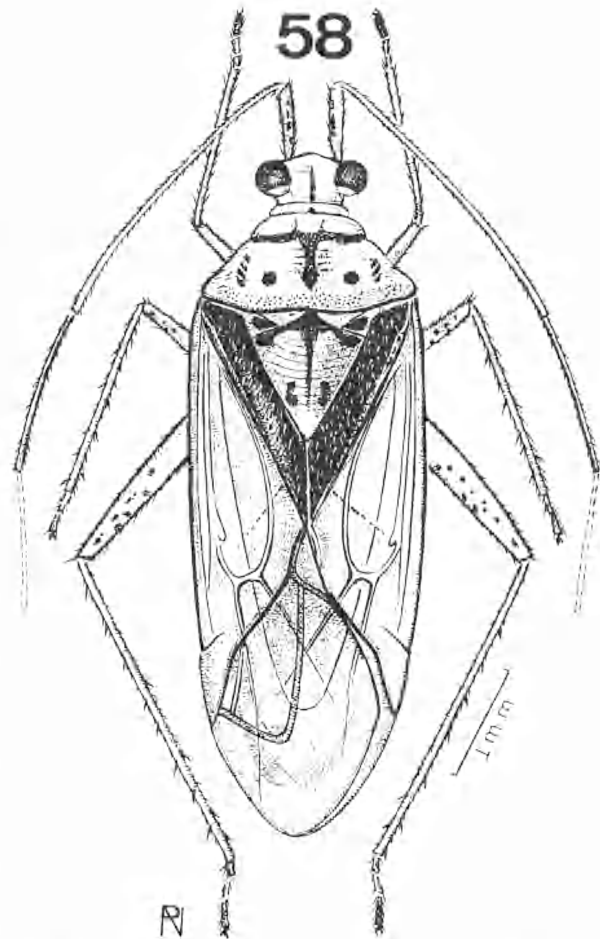


Fig. 58—*Hyalopeplinus cristovalensis* n.sp., male, holotype.

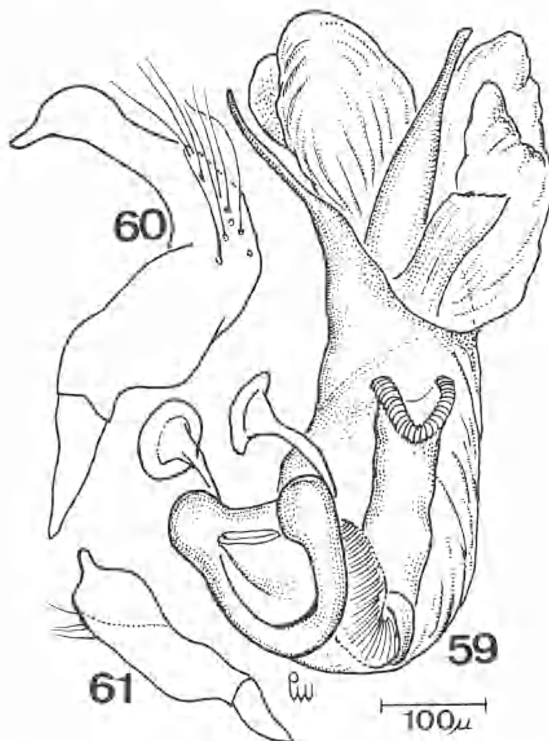
Male: Length 5.4 mm, width 1.8 mm. **Head:** Length 0.4 mm, width 1.2 mm, vertex 0.4 mm. **Antenna:** Segment I, length 0.6 mm; II, 2.8 mm; III, 1.2 mm; IV, broken. **Pronotum:** Length 1.0 mm, width at base 1.6 mm. **Cuneus:** Length 0.76 mm, width at base 0.36 mm (holotype).

General coloration ochraceous to lutescent with black areas; eyes, a longitudinal line on vertex and two spots on frons above antennal peduncles brown to black; antenna brownish, segment I pale to lutescent with spots or fascia on lower external

portion; pronotum with posterior margin of collar, posterior margins of calli (coalescent with a longitudinal median vitta which extends to middle of disc), two lateral vittae and two rounded spots (one at each side) on the disc and an irregular spot on propleura coalescing with a small rounded spot on lateral margin of disc brown to black; mesoscutum with three spots (median and two lateral) black; scutellum with a median longitudinal strigose vitta narrowed towards apex (not reaching extremity), two spots on basal angles and four small spots, sometimes coalescent (two at each side) black; hemelytra glassy, corium and embolium transparent, clavus black, opaque, beset with silvery pubescence, external margin of corium and embolium, corial commissure and corial apex, margin and apex of cuneus, nervures of membrane fuscous, the latter hyaline with two small longitudinal spots on the apical portion. Underside of body pale yellow to ochraceous, posterior margin of mesosternum, a spot on metapleura and a lateral, longitudinal fascia on abdomen pale yellow; femora with distinct black spots.

Lateral margins of pronotum, clavus, embolium and cuneus noticeably pilose, ventral surface of abdomen and pygophore with long hairs.

Genitalia: Penis (fig. 59) with a median sclerotized spiculum and membranous lobe. Left paramere (fig. 60) curved, somewhat enlarged preapically, apex pointed. Right paramere (fig. 61) small, also pointed apically.



Figs. 59-61—*Hyalopeplinus cristovalensis* n.sp.: Fig. 59—Penis; Fig. 60—Left paramere; Fig. 61—Right paramere.

Female: Similar to male in colour and general aspect. Length 6.0 mm, width 2.0 mm, vertex 0.44 mm (allotype).

Holotype: male, SOLOMON ISLANDS; San Cristoval, Kira Kira, 26.vii.1960, light trap, C. W. O'Brien (BISHOP). **Allotype:** female, Bweinaniawarikiapu, 12.viii.1960, light trap, C. W. O'Brien. **Paratypes:** 6 females and 7 males, same data as types (BISHOP), and author's collection.

This species is close to *Hyalopeplinus solomonensis* n.sp. but differs by the colour of pronotum and by the lack of velvety spots on the sides of abdomen.

Hyalopeplinus fijiensis Carvalho & Gross, n.sp.

(Figs. 62, 87)

Characterised by the reddish scutellum and by the black suffusion on calli covering most of calli.

Male: Length 5.7 mm, width 2.0 mm. **Head:** Length 1.0 mm, width 1.1 mm, vertex 0.48 mm. **Antenna:** Segment I, length 0.7 mm; II, 2.6 mm; III, 1.0 mm; IV, 0.5 mm. **Pronotum:** Length 1.1 mm, width at base 1.8 mm. **Cuneus:** Length 0.8 mm, width at base 0.51 mm.

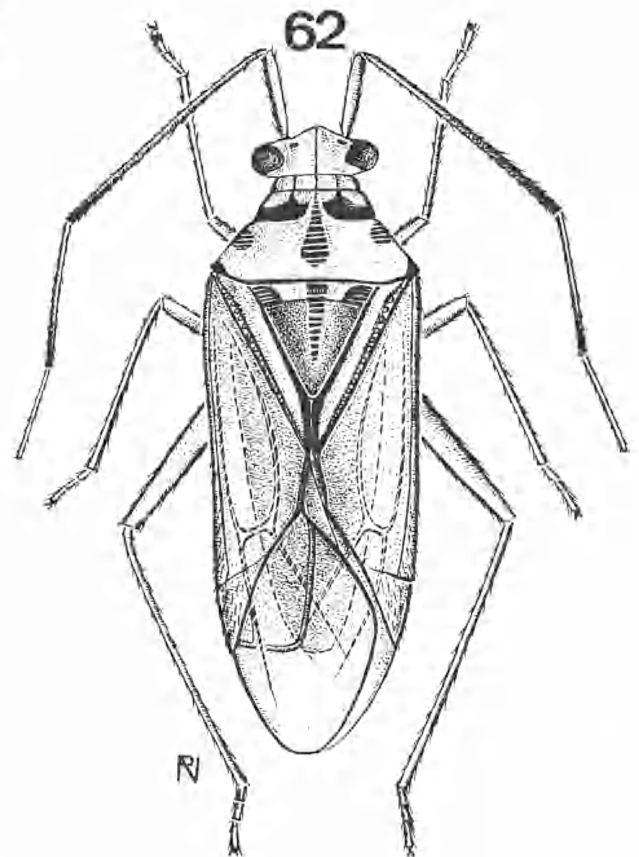


Fig. 62—*Hyalopeplinus fijiensis* n.sp., male, holotype.

General coloration ochraceous with a faint tinge of green shining through hind lobe of scutellum and corium, embolium, clavus and cuneus. On head clypeus from above reddish, on crown dorsally a thin longitudinal line brown and anteriorly a vivid black spot above each antennifer; apex of second and third antennal segments faintly infuscated, from the small portion left of one of the fourth segments that segment too may be wholly infuscated.

On pronotum five black bars on collar, central and extreme lateral ones wider and longer than the ones behind the inner margins of the eyes. Calli strongly marked with black except on their interior and exterior anterior margins. Between calli and anteriorly continuous with central line on collum and there extending back to just before level of lateral angles black, impressed and transversally striate line which is expanded basally, on either side of expanded portion of latter but near the lateral margins a depressed striate pit and a spot on the lateral angles also black. Mesoscutum blackish except for a short, oblique, reddish-orange bar on each side about midway between centre and lateral margin; on scutellum a central, longitudinal, depressed, transversely striate, black line, in anterior portion rest of disc dark reddish. Clavus outlined with black, more broadly so along inner and posterior margins, this black continuing on to corium for a short distance behind apex of clavus. Hemelytra and wings vitreous, embolium and cuneus more opaque.

Anteclypeus anteriorly and laterally also reddish, apex of rostrum black. Laterally on propleura in addition to the lateral black spot on collar and at the lateral angles of the pronotum a large K-shaped bluish-black area which is strigose in parts. Anterior scute of mesopleural region bluish-black, posterior brownish yellow. Peritreme of scent gland brownish yellow, metapleuron above this bluish-black. Sides of abdominal ventrites black dorsally except for last and genital segments. Anterior portion of hind femora strongly maculated with brown.

Pilosity restricted to appendages where it is short and pale except for some longer thin spinous hairs on hind femora.

Genitalia: Penis with membranous lobes and a sclerotised spiculum. Left paramere falciform, pointed apically. Right paramere smaller, also with an acute distal extremity.

Female: Similar to male in coloration and general aspect. Length 6.1 mm, width 2.2 mm, vertex 0.50 mm.

Holotype: male, FIJI: Nadarivatu, Viti Levu, 8.ii.1968, N. McFarland (SAM, registered number 121,076).

Paratypes: males and females, Viti Levu, ii.1951. N. L. H. Kraus (BISHOP).

This species is close to *Hyalopeplinus samoanus* (Knight) but differs by the colour of scutellum and lateral portion of pronotum (figs. 83, 87).

***Hyalopeplinus malayensis*, n.sp.**

(Figs. 63-66, 91)

Characterised by the colour of frons, collar and lateral area of propleura.

Female: Length 6.2 mm, width 2.0 mm **Head:** Length 0.5 mm, width 1.2 mm, vertex 0.52 mm. **Antenna:** Segment I, length 0.6 mm; II, 2.4 mm; III, 1.0 mm; IV, 0.8 mm. **Pronotum:** Length 1.0 mm, width at base 1.8 mm. **Cuneus:** Length 0.68 mm, width at base 0.40 mm (holotype).

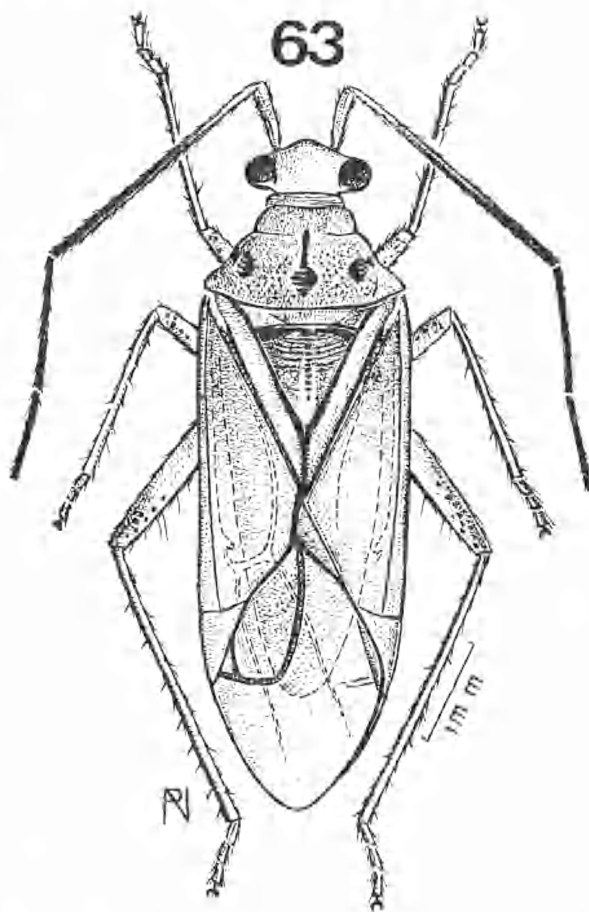


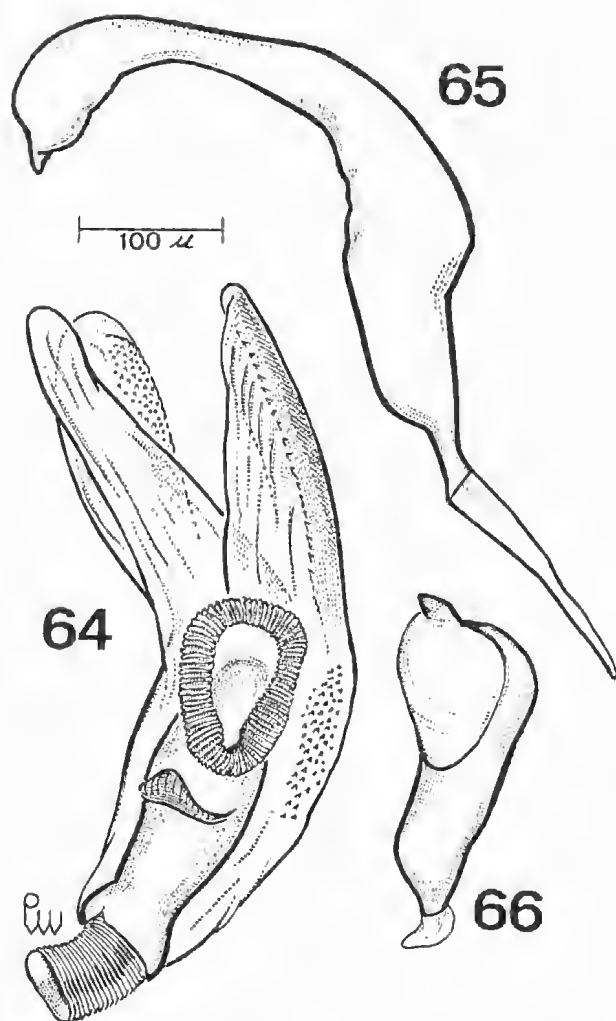
Fig. 63—*Hyalopeplinus malayensis* n.sp., male, holotype.

General coloration ochraceous with black to fuscous areas; eyes, median longitudinal vitta (dilated as a spot posteriorly) and two lateral spots on disc of pronotum, basal angles and a median longitudinal strigose vitta on scutellum (not reaching apex), lateral margins of clavus, claval commissure, apical margin and commissure of corium, margins of cuneus and nervures of membrane fuscous to black;

antenna fuscous, segment I ochraceous, corium and membrane glassy, transparent, embolium and cuneus opaque. Underside of body ochraceous, propleura above with a longitudinal vitta (enlarged posteriorly) black; between this vitta and the lateral rounded spot of pronotum there is also a small black spot; apex of rostrum fuscous; legs ochraceous, hind femora with a series of fuscous spots on external margin.

On the specimens from Malaya the apex of scutellum and a small area at each side of median longitudinal strigose vitta are paler yellow; on the Sumatran and Sri Lanka specimens the longitudinal median vitta of pronotum is continuous (on allotype this vitta extends also over vertex; and the collar, besides the median bar or vitta, also possessing two others on each side, one exteriorly and one laterally).

Male: Similar to female in general aspect but with collar showing two extra vittae on lower lateral margin. Length 5.4 mm, width 1.8 mm, vertex 0.52 mm.



Figs. 64-66—*Hyalopeplinus malayensis* n.sp.: 64—Vesica of aedeagus; Fig. 65—Left paramere; Fig. 66—Right paramere.

Genitalia: Penis (fig. 64) with a small sclerotised spiculum and membranous lobes. Left paramere (fig. 65) falciform, pointed apically. Right paramere (fig. 66) small, enlarged apically, with a minute sclerotised apex.

Holotype: female, LAOS; Sedone Prov., Pakson, 18.v.1965, P. D. Ashlock, light trap (BISHOP). *Allotype*: male, INDONESIA: Dolok Merangir, Sumatra, July-Aug., 1971, Deihl (AMNH). *Paratypes*: female, SRI LANKA: Peradeniya, viii.1911 (BMNH); female, INDONESIA: Sumatra, Dolok Merangir, Sept. 27-30, 1970, Deihl (AMNH); female, same data as holotype; VIETNAM: Saigon, viii.1903, Donnateur Comm. Foukeut; Sanari, 1934.

This species resembles *Hyalopeplinus cairnsensis* n.sp. but vittae of the propleura do not come as close to the lateral spots on the dorsum of the pronotum.

Hyalopeplinus papuensis, n.sp.

(Figs. 67-70, 84)

Characterised by the colour of frons, sides of sternum and abdomen.

Male: Length 4.8 mm, width 1.8 mm. *Head*: Length 0.4 mm, width 1.2 mm, vertex 0.44 mm. *Antenna*: Segment I, length 0.7 mm; II, 2.4 mm; III, 1.8 mm; IV, 0.7 mm. *Pronotum*: Length 0.9 mm width at base 1.5 mm. *Cuneus*: Length 0.60 mm, width at base 0.32 mm (holotype).

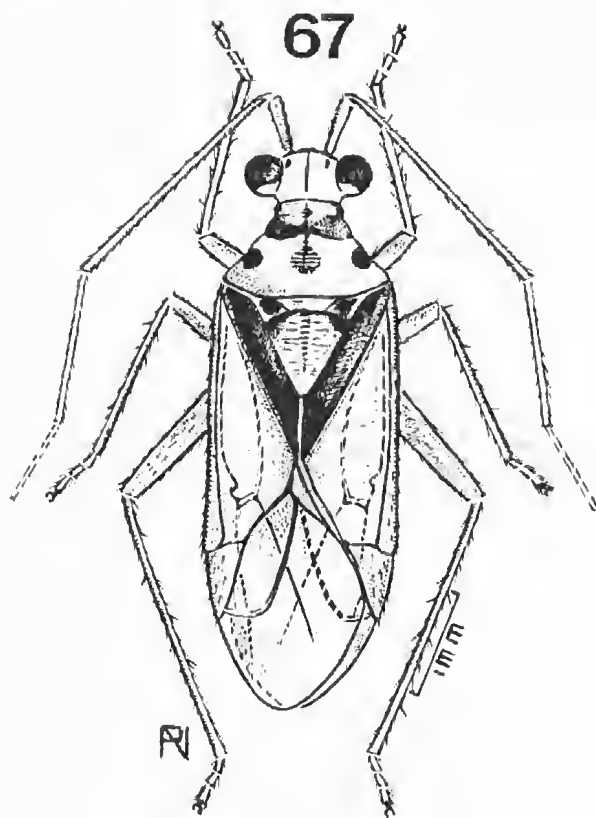


Fig. 67—*Hyalopeplinus papuensis* n.sp., male, holotype.

General coloration ochraceous with fuscous to black areas; eyes, area of calli, five roundish spots on disc of pronotum, one median followed anteriorly by a longitudinal median vitta reaching collar and vertex, and four lateral spots, the larger ones seen from above and the smaller ones seen only from side (united or not with larger spots); two lateral spots on mesoscutum, longitudinal strigose vitta of scutellum (not reaching apex) and clavus fuscous to black; embolial and cuneal margins, apical margin of corium and nervures of membrane fuscous; corium and membrane glassy, transparent, embolium and cuneus opaque; sternal area ochraceous, propleura (except margin of anterior coxal cleft), mesosternum laterally, meso and metapleura black. In some specimens the posterior portion of propleuron below the dark fascia ochraceous; abdomen reddish laterally. The collar of this species shows three bars or vittae above (the median one extending whole length of the collar but the two lateral ones not reaching anterior margin) and two lower ones laterally behind eyes well marked and about as wide as width of segment I of antenna, black. Legs ochraceous, tibiae slightly darker.

Genitalia: Penis (fig. 68) with a small sclerotized spiculum and membranous lobes. Left paramere (fig. 69) falciform, pointed apically. Right paramere (fig. 70) small, globose apically, ending in a blunt point.

Female: Similar to male in colour and general aspect. Length 6.5 mm, width 2.1 mm, vertex 0.48 mm.

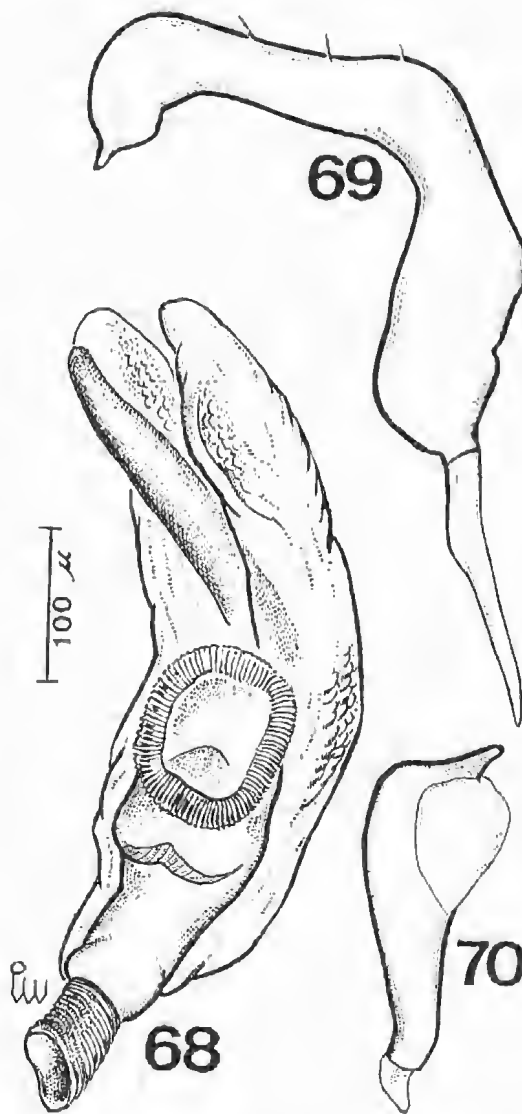
Holotype: male, PAPUA-NEW GUINEA: Abaleti, Rossel Isl., 0.50 m, no12, 28.ix.1956, Fifth Archbold Exp. to New Guinea, L. J. Brass (AMNH). *Allotype*: female, Biniguni, Gulariu River, 150 m, no3, July-Aug. 14.1953, Geoffrey M. Tate, Fourth Archbold Exp. *Paratypes*: two males, same data as holotype; female, Mt. Riu, Sudest Isl. 250-350 m, no10, 9.i.1956, Fifth Archbold Exp. to New Guinea, L. J. Brass, male, New Guinea, S. E. Ruka 9 m, 12.viii.1964, H. Clissold, light traps. INDONESIA: Irian Jaya, Waris S of Hollandia, 450-500 m, 1-7.viii.1959, T. C. Maa; male, NEW BRITAIN: Linga Linga, W of Willeumes, P. En. Im. xiv.1956, J. L. Gressitt.

Differs from *Hyalopeplinus samoanus* (Knight) by the pale humeral angles and by the reddish lateral fascia of abdomen.

Hyalopeplinus philippinensis, n.sp.

(Figs. 71-74, 88)

Characterised by the colour of frons, collar and lateral area of sternum.



Figs. 68-70—*Hyalopeplinus papuensis* n.sp.: Fig. 68—Vesica of aedeagus; Fig. 69—Left paramere; Fig. 70—Right paramere.

Male: Length 5.8 mm, width 1.8 mm. *Head*: Length 0.4 mm, width 1.2 mm, vertex 0.44 mm. *Antenna*: Segment I, length 0.7 mm; II, 2.7 mm, III, 1.4 mm; IV, 0.9 mm. *Pronotum*: Length 1.1 mm, width at base 1.6 mm. *Cuneus*: Length 0.72 mm, width at base 0.40 mm.

General coloration ochraceous with fuscous to black areas; eyes, three spots on pronotum—one median followed anteriorly by a longitudinal vitta reaching collar, two lateral ones visible from above; median and lateral spots on mesoscutum, a median longitudinal strigose vitta on scutellum (not reaching apex) black; margins of clavus, commissure and apical margin of corium, margins of embolium, margins of cuneus and nervures of membrane fuscous; corium and membrane glassy, transparent; antenna ochraceous, segments III and IV fuscous. Underside of body ochraceous, a lateral fascia on propleura coalescing or not with lateral spot of disc

black; legs pale; collar with three median bars or vittae and two lower lateral ones (their width approximately equal to width of segment I of antenna) black; femora with fuscous spots externally, abdomen with a lateral orange fascia.

Genitalia: Penis (fig. 72) with a sclerotized spiculum and membranous lobes provided with minute teeth apically. Left paramere (fig. 73) falciform, pointed. Right paramere (fig. 74) globose, small.

Female: Similar to male in colour and general aspect. Length 6.0 mm, width 2.0 mm, vertex 0.46 mm.

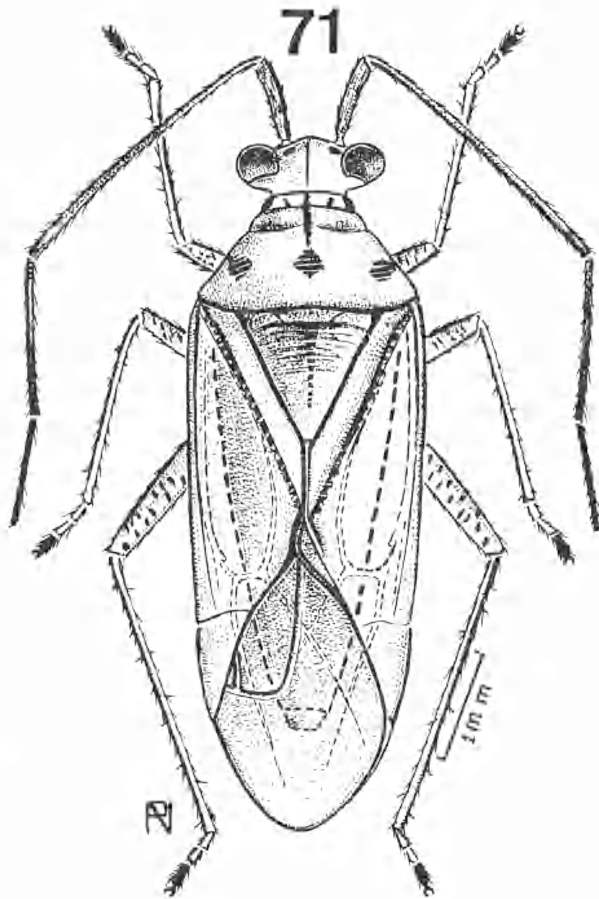
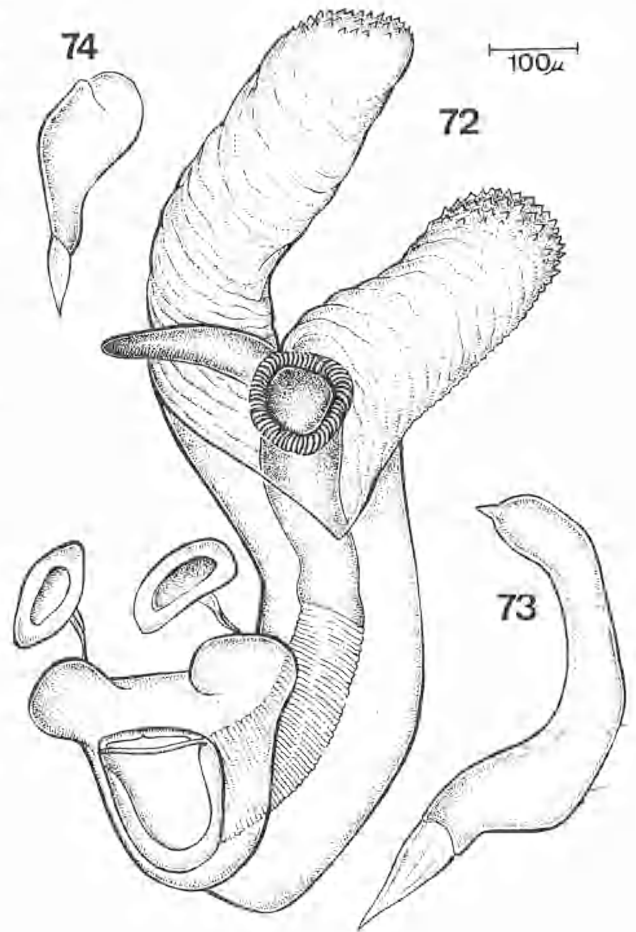


Fig. 71—*Hyalopeplinus philippinensis* n.sp., male holotype.

Holotype: male, PHILIPPINES: Negros I., Camp Lookout, Dumaguete, 14.v.1961, T. Schneiria, A. Reyes (AMNH). **Paratypes:** seven males and females Luzon, Prov. Ifugao, Mt. Mayoyao, 1 000-1 500 m, 7.vii.1966, H. Torrevillas, light trap (BISHOP), and in the author's collection.

This species approaches *Hyalopeplinus papuensis* n.sp. but differs by the pale colour of sternal area and by the ochraceous area of calli.



Figs. 72-74—*Hyalopeplinus philippinensis* n.sp.: Fig. 72—Penis; Fig. 73—Left paramere; Fig. 74—Right paramere.

Hyalopeplinus samoanus (Knight, 1935), n. comb.

Guisardus samoanus Knight, 1935, p. 211, fig.;
Carvalho, 1959, p. 319.

(Figs. 75-78, 83)

Characterised by the colour of pronotum and by the structure of male genitalia.

Male: Length 5.9 mm, width 2.0 mm. **Head:** Length 0.5 mm, width 1.3 mm, vertex 0.48 mm. **Antenna:** Segment I, length 0.6 mm; II, 2.5 mm; III, 1.4 mm; IV, 0.5 mm. **Pronotum:** Length 1.0 mm, width at base 1.7 mm. **Cuneus:** Length 0.80 mm, width at base 0.40 mm.

General coloration ochraceous to pale yellow with fuscous to black areas; eyes, antenna (segments II-IV darker), narrow longitudinal line on vertex fuscous to brown, two spots above antennal peduncle on frons black, clypeus castaneous; pronotum with a wide vitta laterally, a small median longitudinal triangular vitta and two small (sometimes obsolete) spots or vittae at each side of median vitta of collar; hind margin of calli, a longitudinal median vitta following median vitta of collar, enlarged and globose posteriorly at middle of disc,

two sublateral spots, usually curved anteriorly, continuing or not with equivalent spot on lateral margin of pronotum, a spot at humeral angles, a longitudinal vitta on propleura coalescing with another at lateral margin fuscous to black; spots at middle and basal angles of mesoscutum, a longitudinal vitta on scutellum narrowed towards apex (but not reaching it) and basal angles black; clavus internal and externally, claval, corial and cuneal margins and nervures of membrane fuscous. Underside of body pale yellow, mesoscutum laterally, metapleura and spot on second abdominal segment fuscous, lateral longitudinal vitta on abdomen black; legs pale yellow, hind femora tending to castaneous apically with fuscous spots on outer surface.

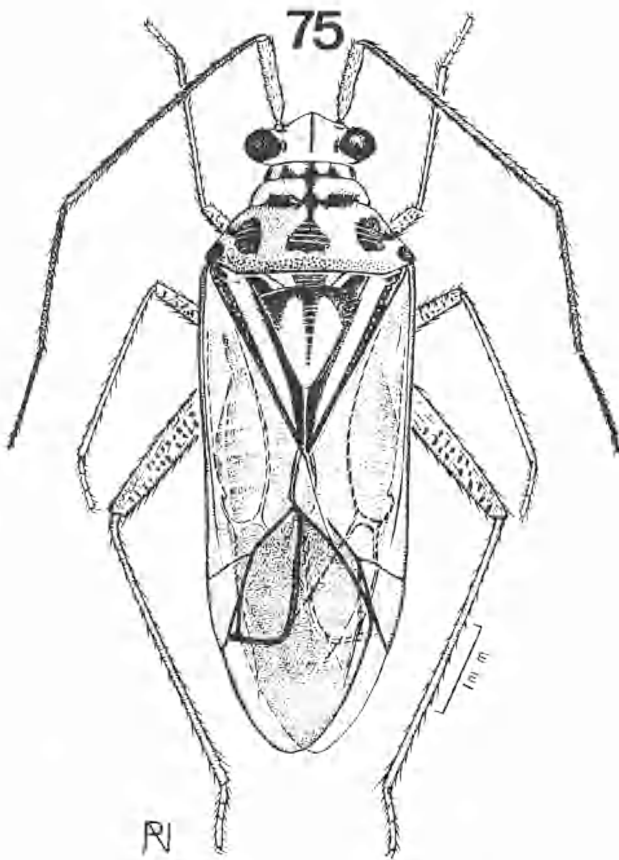


Fig. 75—*Hyalopeplinus samoanus* (Knight), female.

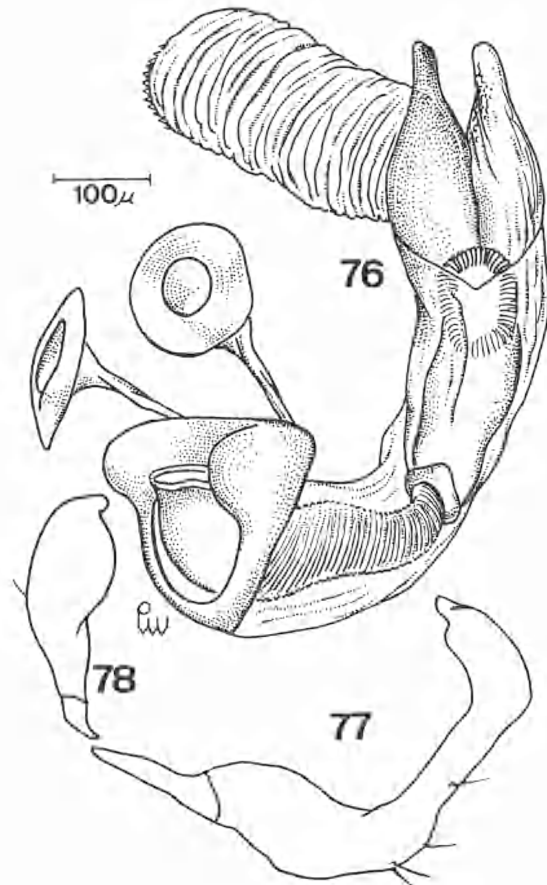
Genitalia: Penis (fig. 76) with a sclerotised spiculum and membranous lobes. Left paramere (fig. 77) falciform, thicker at basal and subapical portions, pointed apically. Right paramere (fig. 78) small, thickest at middle, with a blunt point at apex.

Female: Similar to male in colour and general aspect. Length 6.2 mm, width 2.2 mm, vertex 0.52 mm.

Geographical distribution: Samoa, New Hebrides, Raratonga Is., American Samoa, Society Islands, Tabuai Is.

Specimens studied: several males and females, SAMOA: Afiamalu, Upolu, 10.vi.1940, 2 200 ft, at light, Swezey and Zimmerman; id. 25.vi.1940; id. 30.vi.1940; id. 5.vii.1940; id. ii.1955, N. L. Krauss; Pago-Matafao trail, 13.vii.1940, Tutuila I, 2 141 ft, beating shrubbery; Tapafao, Upolu, 21.v.1940, 1 000 ft, at light, Swezey & Zimmerman; Afiamalu, Upolu, iii.1962, R. W. Taylor (BISHOP and AMNH). AMERICAN SAMOA: Tutuila, Tapuna, 5.viii.1964, N. R. Spencer; Tatuputimu Farm, 11.xi.1963; Fagatogo, 19.vii.1963 (BISHOP); NEW HEBRIDES: Espiritu Santo I. (SW), Namatosopa, 300 m. 29.viii.1957; Narango, 90 m, vi.1960 (BISHOP); Aneityum, Red Crest, 1 200 ft, 3 m NE of Anelgauhut, v.1955; Erromanga, vii.1930, L. E. Cheesman, (BMNH); Aneityum, Agathis Camp, 19-21.vii.1971, G. Robinson (SAM). RARATONGA ISLAND: 2.ii.1937 (BISHOP). SOCIETY ISLANDS: Moorea, Baie de Cook, iii.1959, N. L. Krauss (BISHOP).

This species differs from others in the genus by the humeral angles and abdomen being black laterally.



Figs 76-78—*Hyalopeplinus samoanus* (Knight): Fig. 76—Penis; Fig. 77—Left paramere; Fig. 78—Right paramere.

***Hyalopeplinus solomonensis*, n.sp.**

(Figs. 79-82, 90)

Characterised by the colour of pronotum and lateral margins of sternum.

Male: Length 5.6 mm, width 2.0 mm. *Head*: Length 0.3 mm, width 1.2 mm, vertex 0.44 mm. *Antenna*: Segment I, length 0.6 mm; II, 3.1 mm; III, 1.4 mm; IV, broken. *Pronotum*: Length 1.0 mm, width at base 1.8 mm. *Cuneus*: Length 0.60 mm, width at base 0.32 mm (holotype).

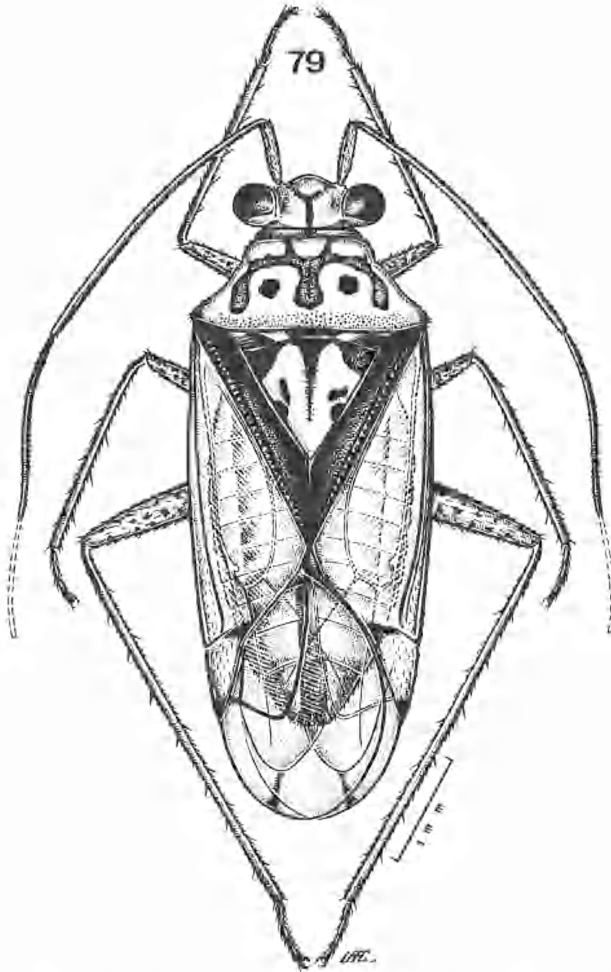
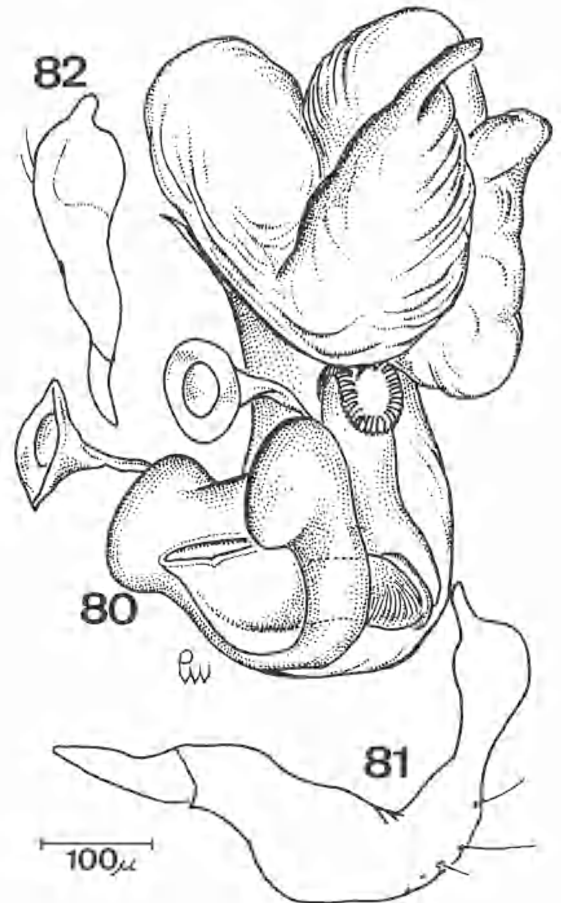


Fig. 79—*Hyalopeplinus solomonensis* n.sp., male, holotype.

General coloration ochraceous to citrine with dark silvery pruinose and brown areas; head with a longitudinal vitta on vertex, branched anteriorly, two spots above base of antennal peduncles, four spots on clypeus (base, sides and apex), vitta on lorum and vitta on lower margin of gena and spot on neck behind eye fuscous to black; eyes castaneous; antenna with segment I and II pale yellow (segment I with a dark longitudinal vitta interiorly), segments III-IV black; pronotum with collar, a characteristic M-shaped pruinose spot on disc (running along hind margin of calli with two projections forwards), the

lateral and median longitudinal branches running backwards and becoming enlarged apically (not reaching hind margin of disc) black, extreme portion of humeral angles fuscous; mesoscutum at middle and external fossae black; scutellum with a longitudinal narrow strigose vitta (not reaching apex) and two vittae curving inwards and arising from the two black spots dark with silvery pruinosity; hemelytra glassy, transparent, clavus opaque, black, covered by silvery pruinosity, inner and outer margins of embolium and corium, commissure, inner and apical portion of cuneus, nervures of membrane fuscous to brown; membrane hyaline with two narrow longitudinal vittae at apical portion. Underside of body pale yellow, xyphus of prosternum, a characteristic spot on propleura with a round velvety black spot at middle, mesosternum (except a small pale spot) and a wide longitudinal vitta laterally on abdomen with elongate velvety spots on the upper portion of each segment fuscous to black; legs pale yellow, femora with small fuscous spots.

Pronotum strigose on black vittae or spots, scutellum also strigose at middle, clavus opaque, pilose, eyes large and prominent.



Figs. 80-82—*Hyalopeplinus solomonensis* n.sp.; Fig. 80—penis; Fig. 81—Left paramere; Fig. 82—Right paramere.

Genitalia: Penis (fig. 80) with a sclerotised spiculum and membranous lobes. Left paramere (fig. 81) falciform, pointed apically. Right paramere (fig. 82) small, globose.

Female: Similar to male in colour and general aspect. Length 6.0 mm, width 2.2 mm, vertex 0.48 mm (allotype).

Holotype: male, SOLOMON ISLANDS: Florida Group, Gairava, M'boli passage, Big Nggela, 13.ix.1960, C. W. O'Brien (BISHOP). **Allotype:** female, same data as holotype. **Paratypes:** Eight males and fourteen females, same data as holotype and New Georgia Grp., Gizo I, 100 m, 17.vii.64, J. Sedlacek, malaise trap; Florida Grp., Vunula, Small Nggela, 19.ix.60, light trap, C. W. O'Brien; Santa Ysabel, Tamatahi, 450 m, 2.vii.1960, light trap, C. W. O'Brien; N. W. Malaita, Dala, 2.vii.1964, R. Straatman, light trap; id. Kwalo, 600-750 m, 29.ix.1957, light trap, J. L. Gressitt; Guadalcanal, Jan. 1921, J. A. Kuschel; id. Roroni, 35 km of Honiara, 10 m, 13.v.1964, R. Straatman; id. Lame nr. Mt. Tatuva, 300 m, 18.v.1960, light trap, C. W. O'Brien; Paripao, 21.v.1960, light trap; Bougainville, Kulugai Village, 150 m, xi.1960, W. W. Brandt; id. Buin, Kangu, 1-50 m, 3.v.1956, J. L. Gressitt.

This species approaches *Hyalopeplinus cristovalensis* n.sp. but differs by the colour of pronotum and velvety spots of abdomen.

Hyalopeplodes Poppius, 1912

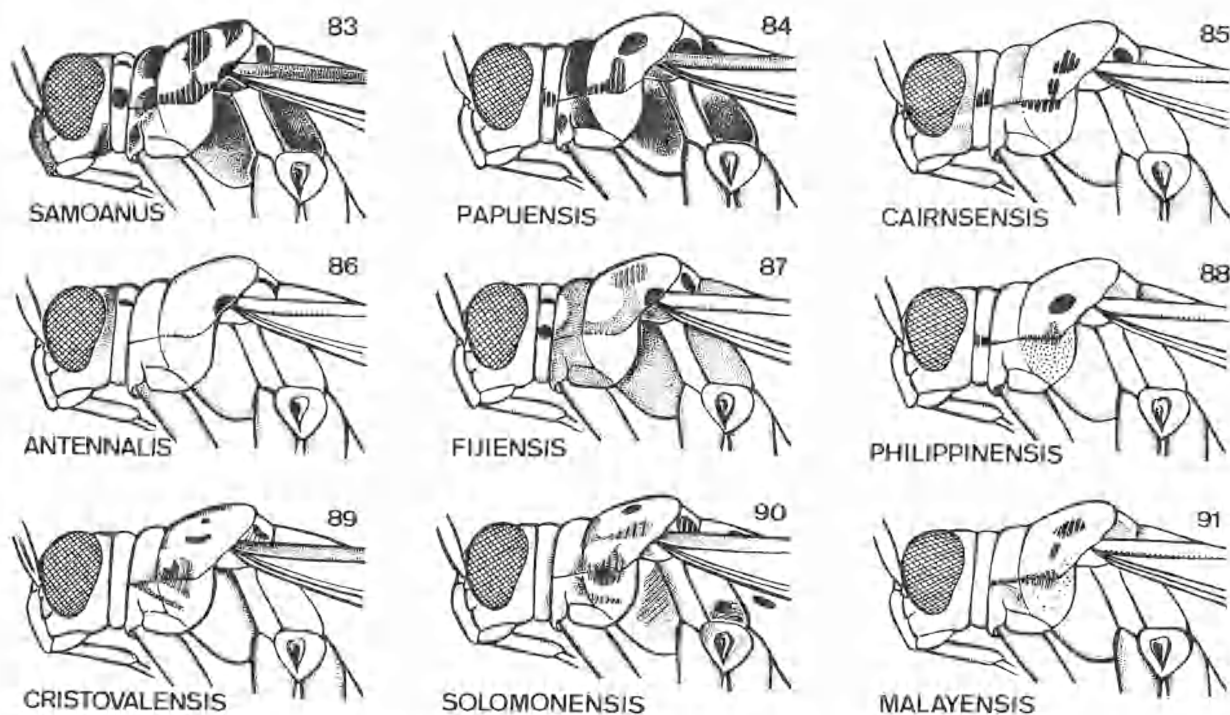
Hyalopeplodes Poppius, 1912a, p. 419; Carvalho, 1959, p. 319.

Type-species: *Hyalopeplodes cyanescens* Poppius, 1912.

Body elongate, mostly glabrous, shining. Head slightly wider than long, eyes almost contiguous with collar, frons with oblique striations (obsolete or absent in some species), clypeus prominent, compressed, rostrum reaching the middle coxae. Antenna with segment I thicker than others, about as long as width of head, segment I about three times as long as I, segments III-IV slender, pubescence short.

Pronotum with anterior portion noticeably constricted (so as to appear three lobed), collar wide, calli prominent, reaching lateral margins and well separated from collar and disc, hind margin slightly sinuate at middle; surface of pronotum faintly transversely rugose, the rugosities more marked on the dark vittae or spots, submarginal portion finely punctate; mesoscutum partially exposed, scutellum longitudinally impressed (with a shallow wide sulcus) and rugose transversely.

Hemelytra glassy, transparent, embolium and cuneus opaque, pubescent (in some species clavus also with hairs), clavo-corial and corio embolial sutures with a row of punctures, cuneus about twice or more as long as wide at base, membrane vitreous.



Figs. 83-91—Lateral view of head and pronotum showing colour markings on species of genus *Hyalopeplinus* n.gen.: Fig. 83—*samoanus*; Fig. 84—*papuensis*; Fig. 85—*cairnensis*; Fig. 86—*antennalis*; Fig. 87—*fijiensis*; Fig. 88—*philippinensis*; Fig. 89—*cristovalensis*; Fig. 90—*solomonensis*; Fig. 91—*malayensis*.

Legs fairly long, hind tibiae with hairs, spines and minute sclerotised tubercles, parempodia divergent towards apices.

This genus is very close to *Hyalopeplus* Stål, 1870 but differs by the rugosities of pronotum occupying only the anterior two thirds and more evident on the black vittae or spots; by the submarginal portion of disc posteriorly finely punctate and without rugosities; by the disc noticeably constricted anteriorly as if being divided into three portions and by the rounded humeral angles.

List of species of the genus *Hyalopeplodes* Poppius

1. *alienus* Carvalho & Gross, n.sp. Australia
2. *australiensis* Carvalho & Gross, n.sp. Australia
3. *borneensis* n.sp. Borneo
4. *cyanescens* Poppius, 1912 Papua-New Guinea
5. *fasciatus* n.sp. Java
6. *maculatus* n.sp. Papua-New Guinea
7. *neoguineanus* n.sp. Papua-New Guinea
8. *ochraceus* n.sp. Papua-New Guinea
9. *queenslandensis* Carvalho & Gross, n.sp. Australia
10. *rubriniscus* n.sp. New Ireland
11. *rubrinoides* n.sp. New Britain
Bismark Is.
12. *similaris* n.sp. Solomon Is.
13. *trinotatus* n.sp. New Ireland

Key to the species of the genus *Hyalopeplodes* poppius

1. Body except cuneus ochraceous; disc of pronotum with obsolete longitudinal orange vittae. *ochraceus* n.sp.
Body with black or dark brown vittae or spots 2
2. Head unicolorous; pronotum with three rugose vitta-like black spots 3
Head with two spots on vertex or a longitudinal median dark vitta or the latter plus two vittae along inner margin of eyes 5
3. Collar without longitudinal dark vittae or bars; pronotum with a median and two lateral brown fossae or spots *alienus* Carvalho & Gross, n.sp.
Collar with longitudinal dark vittae or bars 4
4. Collar with only two lower lateral spots, one at each side; calli unicolorous *trinotatus* n.sp.
Collar with two median triangular black fasciae or bars; calli with two dark spots laterally, one at each side *queenslandensis* Carvalho & Gross, n.sp.
5. Cuneus black to dark brown; collar with four longitudinal median vittae, the lower ones larger and darker; vertex with two black spots at inner margin of eyes; calli mostly black or with black spots *cyanescens* Poppius
Cuneus reddish or sulphurescent; collar with five to seven longitudinal vittae or bars 6
6. Disc of pronotum with a longitudinal median vitta reaching collar anteriorly and two round central spots, or with such vitta and spots plus two lateral vittae, one at each side, black; collar with three longitudinal vittae 7
Disc of pronotum with three longitudinal vittae, usually covered by silvery pruinosity; collar with five to seven longitudinal bars or vittae 8
7. Disc of pronotum with a median longitudinal vitta and two spots black; scutellum with two longitudinal black vittae *maculatus* n.sp.
Disc of pronotum with three longitudinal vittae and two spots black; scutellum with a single basal median longitudinal vitta *borneensis* n.sp.

8. Scutellum with two longitudinal dark brown to black vittae; sometimes fused into one 9
Scutellum unicolorous or nearly so, without longitudinal black vittae 11
9. Collar with three longitudinal black vittae or bars, the lower ones characteristic, large and quadrate; head with a single median vitta *similaris* n.sp.
Collar with five to seven longitudinal black vittae; head with three longitudinal vittae 10
10. Collar with five longitudinal vittae, the two lower ones, one at each side, large, black, quadrate *fasciatus* n.sp.
Collar with seven longitudinal vittae, the two lower ones distinct, not fused into one *neoguineanus* n.sp.
11. Head unicolorous, without longitudinal reddish vittae; disc of pronotum with two longitudinal brown vittae between the median and the lateral *australiensis* Carvalho & Gross, n.sp.
Head with three longitudinal reddish vittae; disc without three longitudinal brown vittae 12
12. Collar with seven longitudinal vittae, the lower ones reddish; sides of abdomen with one red vitta above *rubriniscus* n.sp.
Collar with five longitudinal vittae, the two lower ones characteristic, fused anteriorly; sides of abdomen with two red longitudinal lateral vittae *rubrinoides* n.sp.

Hyalopeplodes alienus Carvalho & Gross, n. sp.

(Figs. 92, 128)

Characterised by the colour of pronotum and collar.

Female: Length 7.5 mm, width 2.0 mm. *Head*: Length 1.0 mm, width 1.3 mm, vertex 0.54 mm. *Antenna*: Segment I, length 1.0 mm; II, 2.8 mm; III, 1.7 mm; IV, 0.8 mm. *Pronotum*: Length 1.5 mm, width at base 2.0 mm. *Cuneus*: Length 1.22 mm, width at base 0.49 mm (holotype).

General coloration brownish yellow; on head eyes blackish and apex of second and third and fourth antennal segments infuscated; pronotum with central depressed fossa pale brown and laterally to this on each side on lateral margins an oval brown spot; clavus vaguely darker than rest of hyaline portion of wings and hemelytra, embolium and cuneus pale yellowish brown; rest of hemelytra and wings hyaline. Dorsum of abdomen yellowish brown medianly, becoming more reddish brown laterally. Laterally and beneath concolorous with dorsal surface and apex of rostrum infuscated, apices of femora and towards lateral margins of abdomen faintly reddish.

Pilosity restricted to apical portion of embolium, cuneus, appendages and underside of abdomen, the pilosity dark on all but the underside of the abdomen where it is whitish. On tibiae some longer and paler spine like hairs interspersed with the shorter dark pilosity.

On pronotum medially a longitudinal, rather narrow, depressed transversely strigose groove extending from level of hind margin of calli to about $\frac{2}{3}$ of hind lobe. Disc of hind lobe faintly transversely strigose. Scutellum depressed anteriorly in the middle behind which is a longitudinal, depressed, transversely strigose groove running almost to apex.

Male: Unknown.

Holotype: female, AUSTRALIA: North Queensland, Cairns District, F. P. Dodd; 1 damaged female, Kuranda, F. P. Dodd (SAM Reg. no. I20,980).

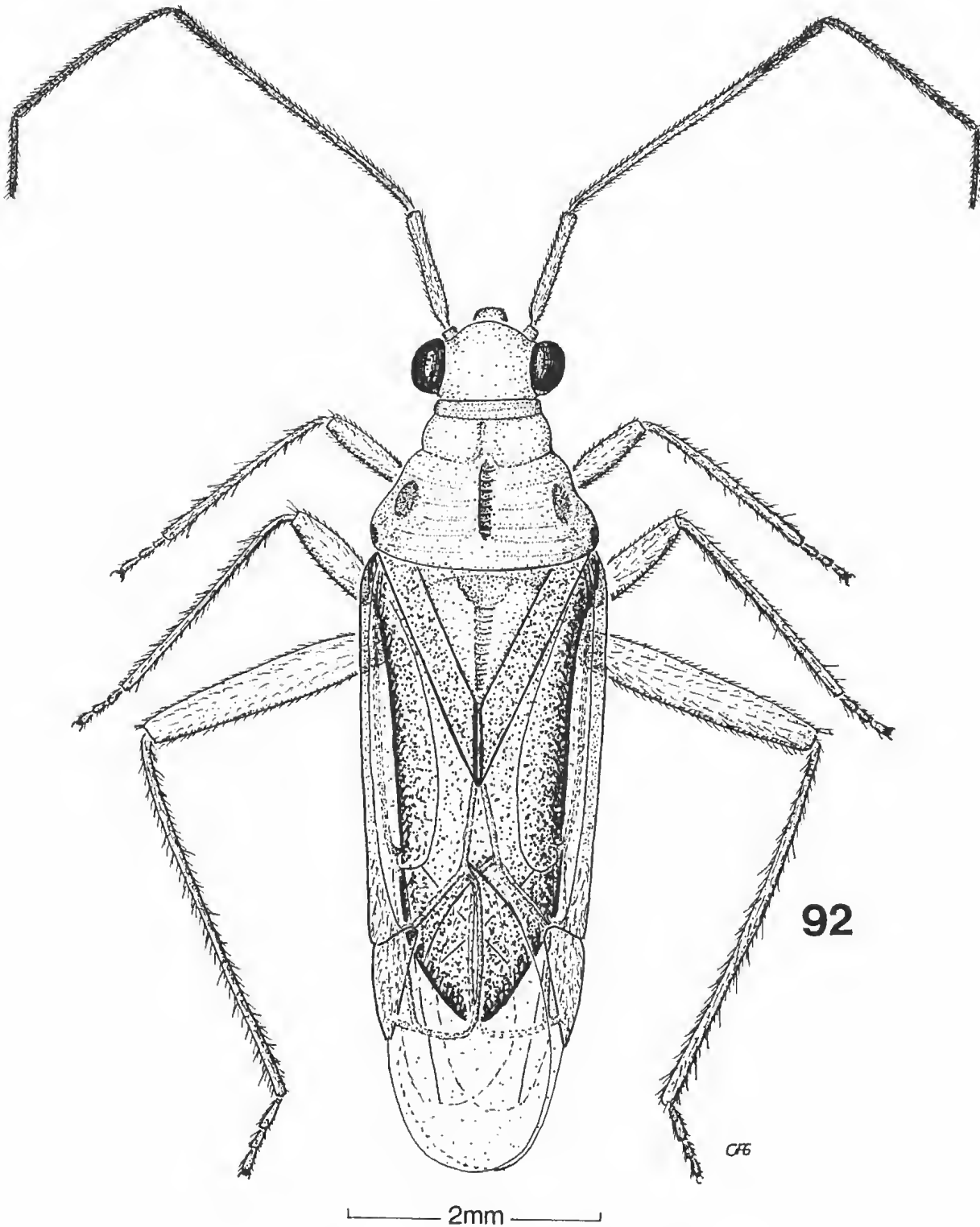


Fig. 92—*Hyalopeplodes alienus* Carvalho & Gross, n.sp., female, holotype.

Differs from *Hyalopeplodes australiensis* n.sp. by having the body considerably longer in relation to its width and also by having the transversely strigose groove on the pronotum narrow and brownish in colour.

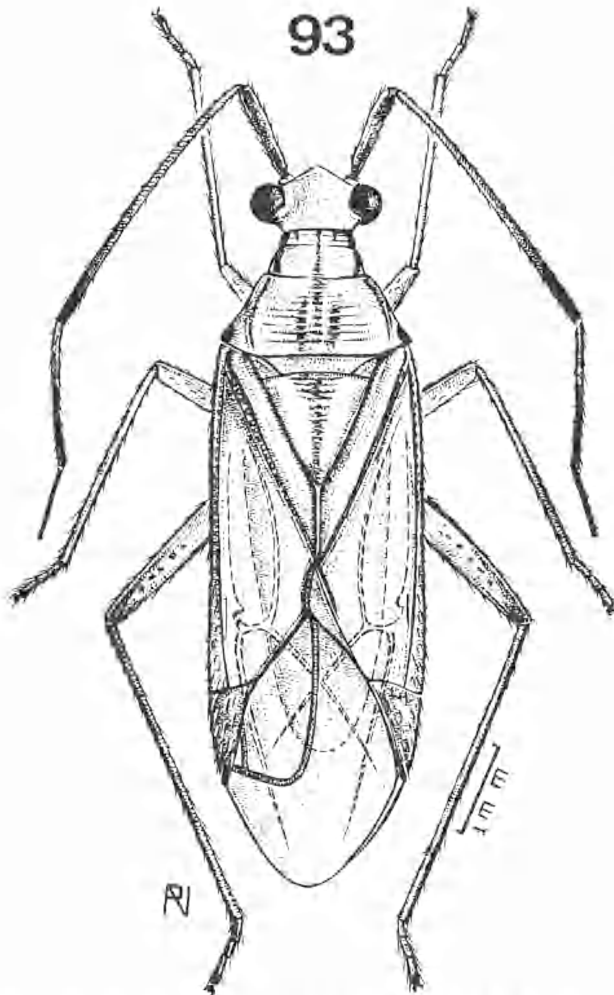


Fig. 93—*Hyalopeplodes australiensis* Carvalho & Gross, n.sp., female, holotype.

Hyalopeplodes australiensis
Carvalho & Gross, n. sp.

(Fig. 93, 129)

Characterised by the colour of head and pronotum.

Female: Length 6.8 mm, width 2.2 mm. **Head:** Length 0.5 mm, width 1.1 mm, vertex 0.52 mm. **Antenna:** Segment I, length, 1.0 mm; II, 2.9 mm; III, 1.5 mm; IV, 0.7 mm. **Pronotum:** Length 1.2 mm, width at base 1.9 mm. **Cuneus:** Length 0.76 mm, width at base 0.44 mm (holotype).

General coloration ochraceous with reddish and black areas; eyes castaneous, antenna reddish, apical portion of segment II, segment III (except base) and segment IV dark brown; collar with three vittae or bars above and two lateral (one of the latter

on each side wider and about as wide as segment I of antenna) dark brown; area of calli and disc with three strigose longitudinal vittae (with a silvery pruinosity on well preserved specimens), disc also with three longitudinal vittae plus two others wider and shorter at posterior portion brown, humeral angles black exteriorly; mesoscutum and scutellum with a longitudinal orange vitta reaching apex of scutellum; hemelytra glassy, transparent margins of clavus, commissure and apical margin of corium, nervures of membrane, inner and outer margin of embolium brown; cuneus and embolium opaque, the first reddish and the second ochraceous; membrane transparent. Underside of body pale yellow, propleura with a longitudinal, strigose brown vitta, legs pale yellow, hind femora reddish apically with two rows of small fuscous spots, hind tibiae and tarsi reddish, claws black.

Male: unknown.

Holotype: female, AUSTRALIA: Queensland; F. P. Dodd, 1907-54, Kuranda, Qld. F. P. Dodd, April 1904 (BMNH). **Paratypes:** female, same data as holotype, June, 1904; female, N. Queensland, Redlynch, 14.viii.1938, Papuan-Australian Exp. B.M. 1947-48; female, Redlynch, Qld. xii.1938, B.M. 1949-61, R. F. Sternitsky, Papuan-Australian Exp., B.M. 1949-61. Female, Kuranda, F. Dodd, (SAM Reg. no. I20,981).

This species approaches *Hyalopeplinus rubrinus* n. sp. and *Hyalopeplinus rubrinoides* n. sp. but differs by the colour of head and pronotum.

***Hyalopeplodes borneensis*, n. sp.**

(Figs. 94-97, 132)

Characterised by the colour of head and pronotum.

Male: Length 6.5 mm, width 2.0 mm. **Head:** Length 0.5 mm, width 1.1 mm, vertex 0.48 mm. **Antenna:** Segment I, length 0.6 mm; II, 2.8 mm; III and IV, mutilated. **Pronotum:** Length 1.3 mm, width at base 1.7 mm. **Cuneus:** Length 0.60 mm, width at base 0.28 mm (holotype).

General coloration ochraceous with brown and reddish areas; eyes brown, antenna, dark brown, segment I reddish; pronotum and vertex with a continuous longitudinal, median vitta which is strigose and widened posteriorly on disc, two strigose lateral spots, humeral angles, two lower lateral vittae on collar, the lowest one reaching over calli dark brown to black; mesoscutum with two lateral black spots; scutellum with two black basal spots joining a longitudinal brown vitta widened basally, apical portion of scutellum lighter; hemelytra glassy, transparent, margins of clavus, commissure and apical margin of corium, nervures of

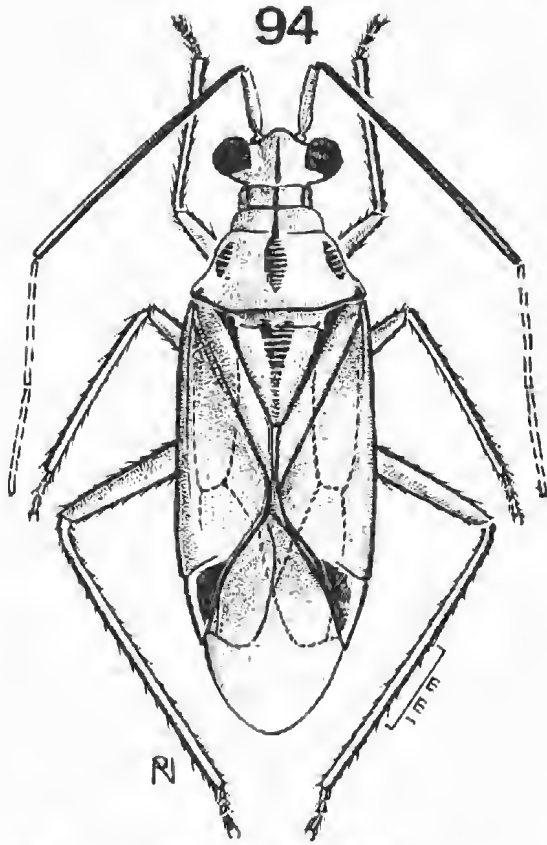


Fig. 94—*Hyalopeploides borneensis* n. sp., male, holotype.

membrane, inner and outer margins of embolium and of cuneus castaneous, median area of latter orange to red; membrane transparent. Underside of body ochraceous, propleura with a lateral posterior strigose vitta fuscous, femora with small fuscous spots, the hind pair tending to orange apically, hind tibiae orange to reddish.

Genitalia: Penis (fig. 95) with membranous lobes provided with minute teeth at extremities. Left paramere (fig. 96) curved, enlarged subapically. Right paramere (fig. 97) smaller, simple.

Female: Similar to male in colour and general aspect. Length 6.5 mm, width 2.0 mm, vertex 0.48 mm. **Cuneus:** Length 0.72 mm, width at base 0.40 mm.

Holotype: Male, EAST MALAYSIA: Mt. Kinabalu, Manei Parei, 5 000 ft, 5.ii.1929, Exp. F.M.S., B.M. 1955-354, H. M. Pendlebury (BMNH). **Allotype:** female, Forest Camp 19 km, N of Kalabakan, 12.x.1962, Y. Hirashima, light trap (BISHOP). **Paratype:** male, same data as holotype.

Approaches *Hyalopeplinus maculatus* n. sp. but differs by the colour of pronotum.

***Hyalopeploides cyanescens* Poppius, 1912**

Hyalopeploides cyanescens Poppius, 1912a, p. 419; Carvalho, 1959, p. 319.

(Figs. 98, 133)

Characterised by the colour of head, pronotum and cuneus.

Female: Length 6.5 mm, width 1.8 mm. **Head:** Length 1.0 mm, width 1.3 mm, vertex 0.60 mm. **Antenna:** Segment I, length 1.0 mm; II, 2.9 mm; III-IV, broken. **Pronotum:** Length 1.5 mm, width at base 2.0 mm. **Cuneus:** Length 1.12 mm, width at base 0.44 mm (lectotype).

General coloration ochraceous with dark areas; inner margin of eye and post-ocular area of head black, antenna pale yellow, apex of segment II and segments III and IV black; pronotum with collar showing four longitudinal vittae (the lower lateral ones larger and darker), spots on calli or the whole area, two lateral spots on disc and a narrow longitudinal vitta (not reaching the hind margin or obsolete in some specimens), propleura (except lower margin), lateral margin of mesosternum fuscous to black; hemelytra ochraceous, transparent, cuneus and embolium partially ochraceous. Underside of body and legs pale yellow to lutescent, hind tibiae tending to castaneous, abdomen with reddish tinge.

Pronotum rugose anteriorly, noticeably constricted behind calli which are prominent, scutellum rugose at middle, clavus, embolium and cuneus pubescent.

Male: unknown.

Specimens studied: female, lectotype (new designation), NEW GUINEA: Astrolabe Bai, Erima (HELSINKI); female, INDONESIA: Bodem, 100m, 11km SE of Oerberfaren, Irian Jaya, 10.vii.1959, light trap (BISHOP).

This species is close to *Hyalopeplus ochraceus* n. sp. but differs by the colour of pronotum.

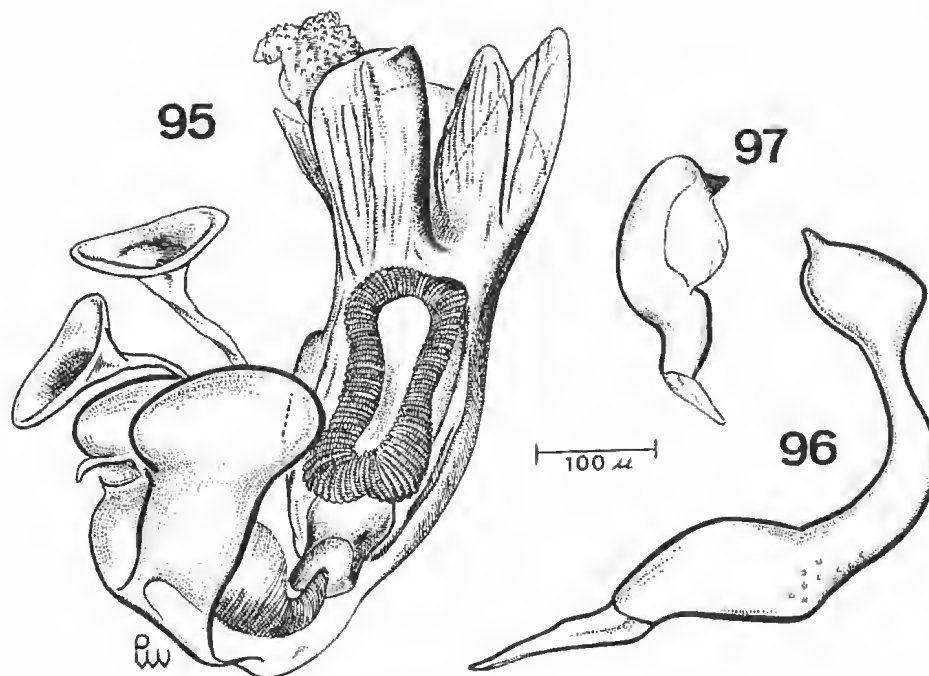
***Hyalopeploides fasciatus*, n. sp.**

(Fig. 125)

Characterised by the longitudinal pruinose vitta of pronotum and by the two wide longitudinal vittae of scutellum.

Female: Length 8.4 mm, width 2.8 mm. **Head:** length 0.8 mm, width 1.4 mm, vertex 0.64 mm. **Antenna:** Segment I, length 1.0 mm; II, 3.2 mm; III, 1.4 mm; IV 0.8 mm. **Pronotum:** Length 1.6 mm, width at base 2.4 mm. **Cuneus:** 1.12 mm, width at base 0.56 mm (holotype).

General coloration flavescent to citrine with dark brown to reddish areas; head, pronotum and scutellum citrine; a longitudinal vitta on middle of head, two lateral ones along inner margins of eyes (obsolete in some specimens) joining middle line of clypeus fuscous to brown; five vittae or bars on



Figs. 95-97—*Hyalopeplodes borneensis* n.sp.: Fig. 95—Penis; Fig. 96—Left paramere; Fig. 97—Right paramere.

collar (the lower lateral ones forming a black rectangular spot behind eye), three longitudinal wide pruinose vittae on pronotum; one median and two lateral (these slightly inside the corresponding pair on calli) black, two obsolete longitudinal vittae running between the pruinose vittae castaneous; mesoscutum and scutellum with lateral margins basally and two longitudinal vittae (not reaching apex) castaneous; hemelytra glassy, transparent, sutures black, cuneus reddish with outer margin pale; membrane glassy, slightly fuscous, nervures dark. Eyes castaneous, antenna reddish, apex of segment II black, segments III-IV black (with pale bases). Underside of body flavescent, a line along side of head, a vitta along upper margin of propleura and another above coxal cleft I castaneous to reddish; legs flavescent, apices of tibiae I and II reddish, femora suffused with red, hind pair apically and hind tibiae totally red, apices of tarsi fuscous.

Pronotum distinctly rugose, scutellum prominent, cuneus noticeably long.

Male: unknown.

Holotype: female, INDONESIA: Bibidjilan, West Java, M. E. Welsh, 8.v.38, in the collection of the author.

This species differs from allied forms by having three longitudinal wide pruinose fasciae on pronotum, two longitudinal fasciae on scutellum and a quadrate black spot present on lower lateral margin of collar.

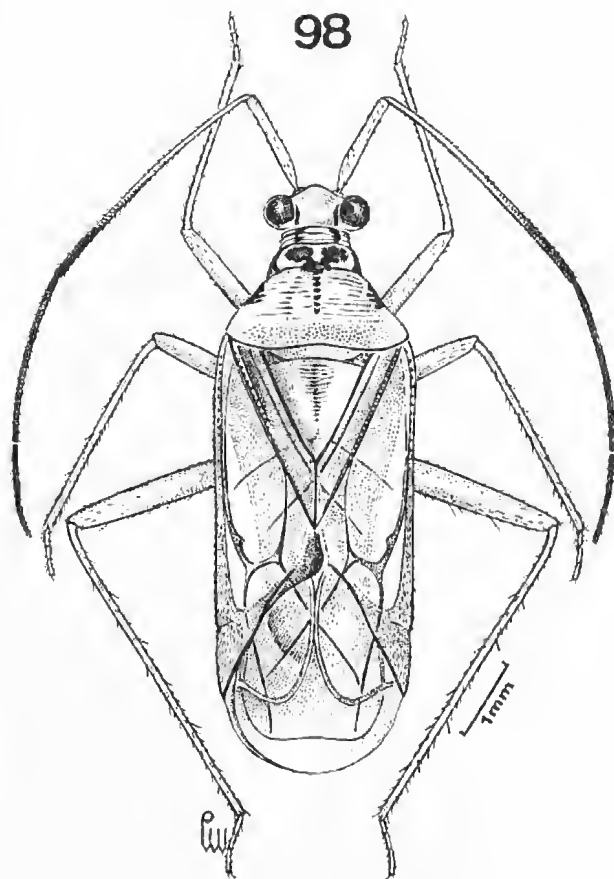


Fig. 98—*Hyalopeplodes cyanescens* Poppius, female, lectotype.

***Hyalopeplodes maculatus*, n. sp.**

(Figs. 99-102, 123)

Characterised by the colour of pronotum, hemelytra and hind legs.

Female: Length 9.8 mm, width 3.2 mm. *Head*: Length 0.7 mm, width 1.6 mm, vertex 0.76 mm. *Antenna*: Segment I, length 1.2 mm; II, 4.2 mm; III-IV, broken. *Pronotum*: Length 1.6 mm, width at base 2.8 mm. *Cuneus*: Length 1.20 mm, width at base 0.64 mm (holotype).

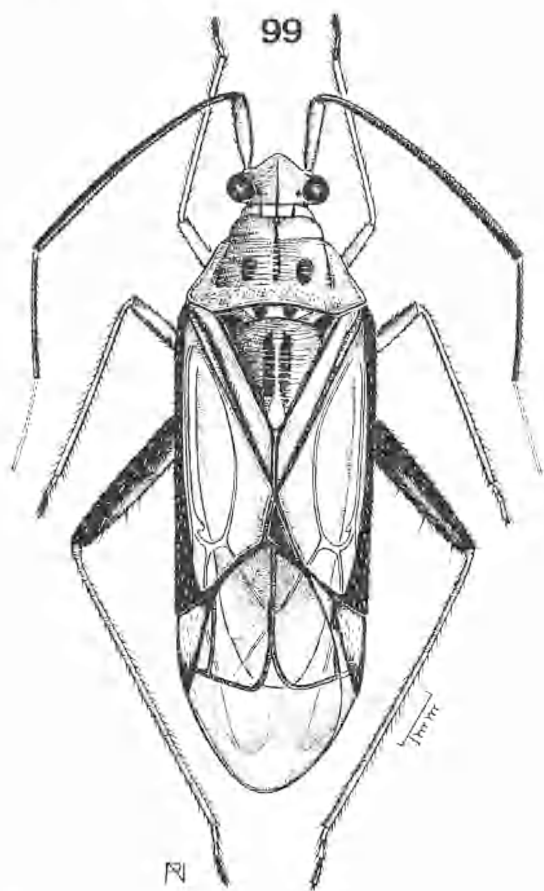


Fig. 99—*Hyalopeplodes maculatus* n.sp.: female, paratype.

General coloration ochraceous to lutescent with brown and reddish areas; a longitudinal vitta on head, eyes, antennae (except segment I) black; pronotal collar with three well marked longitudinal vittae (in some specimens only median vitta present), a longitudinal median vitta on disc not reaching posterior margin, two round spots at central portion, two longitudinal vittae near humeral angles, and a small spot at each angle brown to black; mesoscutum with four dark spots; scutellum with two median longitudinal vittae united or joined brown, apical portion pale; hemelytra glassy, transparent, clavus and corium with inner and outer margins and commissure brown, embolium opaque dark, cuneus opaque, pale at central portion,

reddish at apex and margins (in some specimens the median portion is also reddish); membrane fuscous, nervures brown. Underside of body ochraceous, posterior margin of ostiolar peritreme, keel of metapleura, and apical end of abdomen dark; legs ochraceous, hind femora black, hind tibiae brown, segment II of tarsi fuscous.

Male: Similar to female in colour and general aspect. Length 8.6 mm, width 2.7 mm, vertex 0.72 mm.

Genitalia: Penis (fig. 100) with membranous lobes showing areas of sclerotised teeth. Left paramere (fig. 101) enlarged apically with a terminal short point. Right paramere (fig. 102) small with a sclerotised apical branched tubercle.

Holotype: female, INDONESIA: Swart Val., Karubaka, Irian Jaya, 1 400-1 600 m, 9.xi.1958, J. L. Gressitt (BISHOP). *Allotype*: male, same data as holotype. *Paratypes*: three females, idem, in the above collection and of the author.

This species approaches *Hyalopeplinus similis* n. sp. but differs by the presence of two rounded spots on the disc of the pronotum.

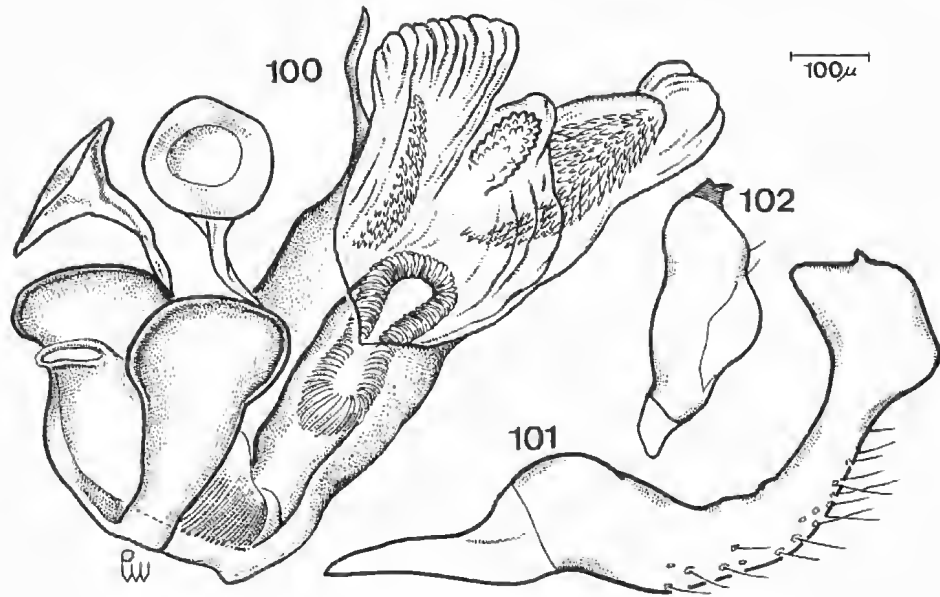
***Hyalopeplodes neoguineanus*, n. sp.**

(Figs. 103-107, 126)

Characterised by the colour of the body and by the structure of male genitalia.

Male: Length 7.6 mm, width 2.6 mm. *Head*: Length 0.6 mm, width 1.2 mm, vertex 0.52 mm. *Antenna*: Segment I, length 1.2 mm; II, 3.0 mm; III, 1.1 mm; IV, 0.6 mm. *Pronotum*: Length 1.5 mm, width at base 2.2 mm. *Cuneus*: Length 0.84 mm, width at base 0.52 mm (holotype).

General coloration ochraceous to citrine with brown and reddish areas; head with a median longitudinal and two lateral vittae (obsolete in some specimens), lateral vitta on gena brown, clypeus, jugum and lorium, posterior margin of eyes on neck, and segment I of antenna reddish, segments III-IV brown to black (segment II tending to reddish at base); pronotum seen from above with collar, calli and disc marked by five longitudinal vittae; one median and two lateral brown with silvery pruinosity; two sublateral and reddish (absent or obsolete in some specimens, especially on females); lateral margins, lower lateral vittae of collar (the upper ones brown to dark), longitudinal vitta on sternal area and lateral portion of abdomen reddish; mesoscutum with two median vittae (not reaching apex) and basal angles black, hemelytra glassy-transparent, inner and outer margins of clavus, corium and embolium (at basal portion), apical



Figs. 100-102—*Hyalopeplodes maculatus* n.sp.: Fig. 100—Penis;
Fig. 101—Left paramere; Fig. 102—Right paramere.

margin of corium and nervures of membrane brown, apical portion (in the male the whole extension) of embolium, corial commissure and cuneus reddish, membrane ochraceous, transparent. Underside of body ochraceous, segment I of rostrum, ostiolar peritreme, upper margins of abdominal segments, terebra and area contiguous reddish, segment IX brown, femora reddish, tibiae brown, the hind pair reddish, tarsi fuscous.

Genitalia: Penis (fig. 105) with membranous lobes provided with sclerotized teeth. Left paramere (fig. 106) curved, ended by a slender point. Right paramere (fig. 107) simple, with a sclerotized apical point.

Female: Similar to male in colour and general aspect. In some specimens the pronotum do not show the longitudinal vittae between the central and the two lateral ones. Length 8.3 mm, width 3.0 mm, vertex 0.52 mm. **Cuneus:** Length 1.00 mm, width at base 0.60 mm (allotype).

Holotype: Male, INDONESIA: Irian Jaya, Wisselmeren, 1 700 m, Wagaete, Tigi L., 17. Aug. 1955, J. L. Gressitt (BISHOP). **Allotype:** female, NEW GUINEA: NE Elliptami Valley, 1 200-1 350 m, August 1-15, 1959, W. W. Brandt. **Paratypes:** 9 females, Ahl.V. Nodungl, 1 750 m, 8.viii.1955, J. L. Gressitt; NE Torricelli Mts. Sugoitei Vill., 900 m, W. W. Brandt, 1-5.ii.1959; Swart Vall., Karubaka, 10.xi.1958; NE Feramin, 1 450 m, 26.viii.63, R. Straatman; Wisselmeren, Moanemani, Kamo, 1 500 m, J. Sedlacek; Duroto, E of Enarotadi, 1 800 m, in the collection above and of the author.

Very close to *Hyalopeplus rubrinus* n. sp. but differs by the presence of longitudinal dark vittae on scutellum. It is also near *Hyalopeplus fasciatus* n. sp. from which it can be separated by the presence of the seven vittae on collar.

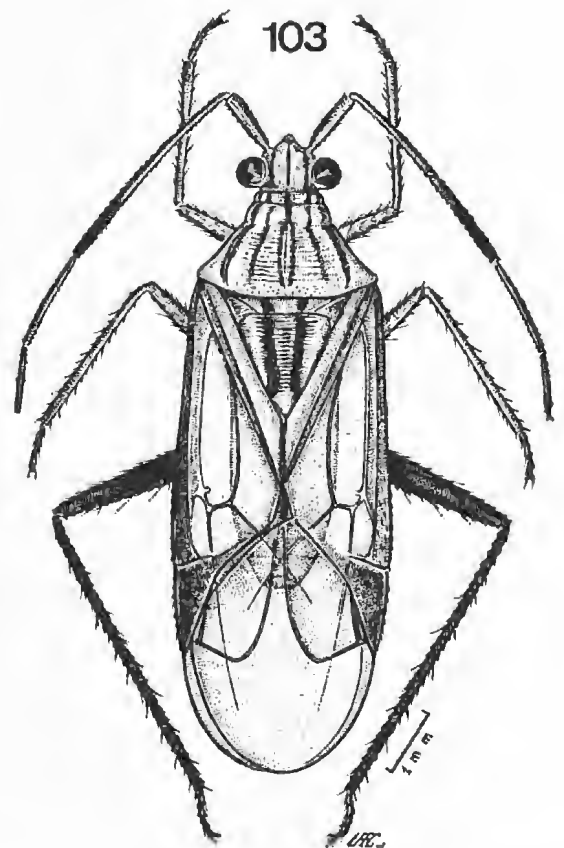


Fig. 103—*Hyalopeplodes neoguineanus* n.sp., male, holotype.

***Hyalopeploides ochraceus*, n. sp.**

(Figs. 108-111, 122)

Characterised by the colour and structure of male genitalia.

Male: Length 7.6 mm, width 2.2 mm. *Head*: Length 0.5 mm, width 1.2 mm, vertex 0.64 mm. *Antenna*: Segment I, length 1.0 mm; II, 2.9 mm; III-IV, broken. *Pronotum*: Length 1.6 mm, width at base 2.2 mm. *Cuneus*: Length 0.80 mm, width at base 0.40 mm (holotype).

General coloration ochraceous tending to lutescent; pronotum and scutellum tending to citrine; in some specimens there is an indication of five longitudinal, orange vittae on disc of pronotum and also an indication of a longitudinal vitta on vertex, base on clypeus, lateral area of head and lateral portion of abdomen; eyes brown; cuneus tending to reddish internally; posterior femora with small reddish spots internally at apical portion.

Pronotum and scutellum noticeably rugose transversally, the disc constricted behind calli.

Genitalia: Penis (fig. 108) with a sclerotized spiculum (fig. 111) and membranous lobes with sclerotised teeth apically; secondary gonopore with groups of sclerotised teeth nearby. Left paramere (fig. 109) curved, pointed apically. Right paramere (fig. 110) globose, with an apical point.

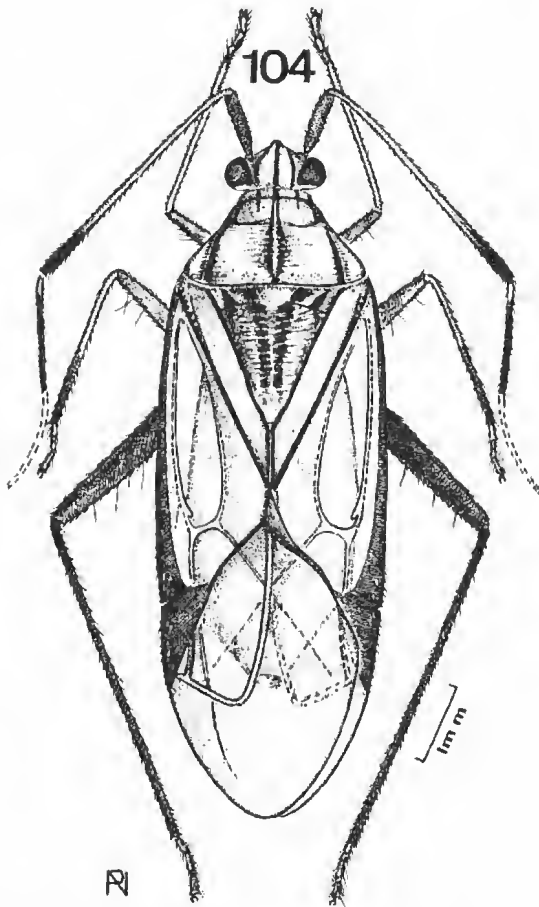
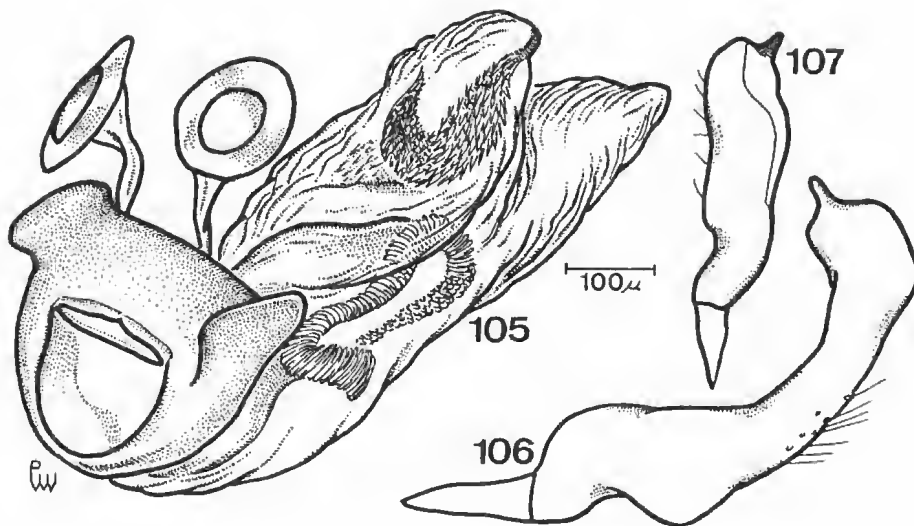


Fig. 104—*Hyalopeploides neoguineanus* n.sp., female, allotype.



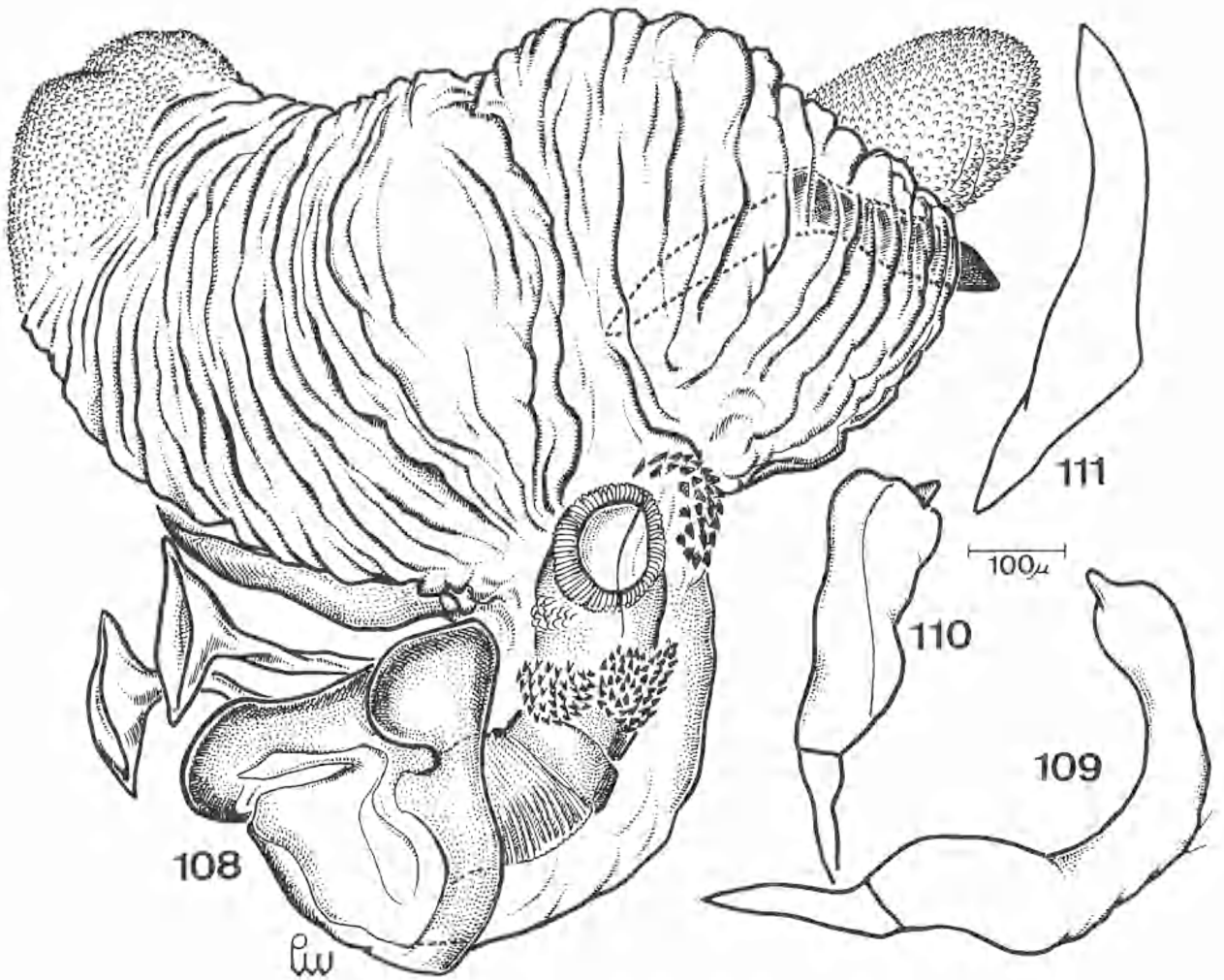
Figs. 105-107—*Hyalopeploides neoguineanus* n.sp.: Fig. 105—Penis; Fig. 106—Left paramere; Fig. 107—Right paramere.

Female: Similar to male in colour and general aspect. Length 7.6 mm, width 2.4 mm, vertex 0.68 mm. *Cuneus*: Length 0.84 mm, width at base 0.56 mm (allotype).

Holotype: Male, NEW GUINEA: Elliptami Valley, 1 200-1 350 m, August. 1-15, 1959, W. W. Brandt (BISHOP). *Allotype*: female, INDONESIA:

Swart Val., Karubaka, Irian Jaya, 10.xi.1958, light trap, J. L. Gressitt. *Paratypes*: two males and three females, same data as holotype, in the above collection and of the author.

Differs from all other species included in the genus by the almost uniform ochraceous colour of the body.



Figs 108-111—*Hyalopeplodes ochraceus* n.sp.: Fig. 108—Penis; Fig. 109—Left paramere; Fig. 110—Right paramere; Fig. 111—Spiculum of aedeagus.

***Hyalopeplodes queenslandensis* Carvalho & Gross, n.sp.**

(Figs. 112, 131)

Characterised by the colour of head and pronotum.

Female: Length 8.4 mm, width 1.9 mm. *Head*: Length 0.5 mm, width 1.3 mm, vertex 0.50 mm. *Antenna*: Segment I, length 0.9 mm; II, 2.8 mm; III, 1.8 mm; IV, broken. *Pronotum*: Length 1.3 mm, width at base 1.9 mm. *Cuneus*: Length 0.88 mm, width at base 0.36 mm (holotype).

General coloration ochraceous with brown to black areas; eyes brown, antennae dark brown, segment I ochraceous; pronotal collar with two longitudinal triangular bars or vittae (the vertex touching calli), two lateral spots on calli, two small ones near the confluence of the latter posteriorly brown; a median longitudinal strigose vitta on disc, widened posteriorly and two lateral spots (also strigose) black; a small brown spot at each side near the two lateral spots but situated inferiorly and the humeral angles brown; mesoscutum and scutellum ochraceous, the latter darker near apex; hemelytra glassy, transparent, margins of clavus, commissure

and apical margin of corium, nervures of membrane brown; embolium and cuneus opaque, orange to reddish membrane transparent. Underside of body ochraceous, a small spot above anterior portion of coxal cleft I and longitudinal strigose vitta on posterior portion of propleura brown; legs pale yellow, femora with reddish tinge apically.

Male: Unknown.

Holotype: female, AUSTRALIA: Kuranda, Qld., June 1904, F. P. Dodd, Queensland, F. P. Dodd, B. M. 1907-54 (BMNH).

This species approaches *Hyalopeplinis rubriniscus* n.sp. *Hyalopeplinus rubrinoides* n.sp. but differs by the colour of head and pronotum.

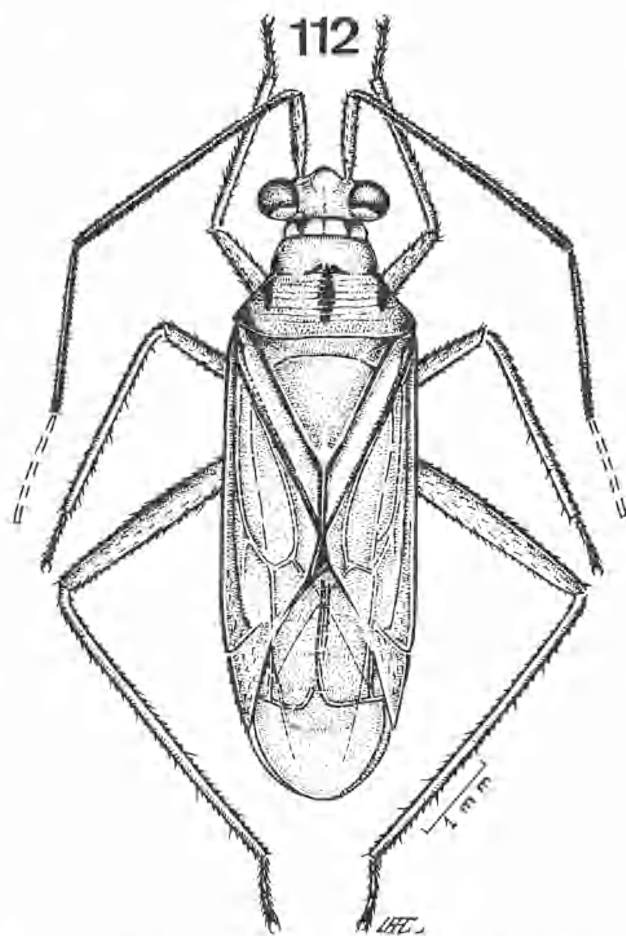


Fig. 112—*Hyalopeplodes queenslandensis* Carvalho & Gross, n.sp., female, holotype.

***Hyalopeplodes rubrinoides*, n.sp.**

(Fig. 127)

Characterised by the colour of collar.

Female: Length 8.4 mm, width 2.7 mm. *Head:* Length 0.8 mm, width 1.4 mm, vertex 0.64 mm. *Antenna:* Segment I, length 0.8 mm; II, 3.0 mm; III, 1.3 mm; IV, 0.8 mm. *Pronotum:* Length 1.6 mm,

width 2.4 mm. *Cuneus:* Length 1.00 mm, width at base 0.52 mm (holotype).

General coloration ochraceous with brown and reddish areas; head with a median longitudinal vitta and two lateral ones along inner margins of eyes which coalesce on clypeus, a lateral vitta on gena and lorum, as well as on jugum, reddish; eyes and antenna brown to black, segment I reddish; pronotum with three longitudinal brown to reddish vittae covered by silvery pruinosity, having also between them two submedian orange vittae (obsolete in some specimens); collar with a longitudinal brown median vitta, two reddish sublateral vittae (following those of head and pronotum) and two lower lateral ones black, fused anteriorly and characteristic for the species; mesoscutum and scutellum ochraceous; unicolorous; hemelytra glassy, transparent, sutures and commissures and nervures of membrane fuscous; embolium and cuneus reddish; membrane pale at intrareolar portion and ochraceous at extra-areolar portion, underside of body ochraceous, lateral margin of pronotum and a longitudinal vitta on side of sternal portion following longitudinal vitta of head and continuing through lateral portion of abdomen reddish; legs pale yellow, femora towards apices and hind tibiae reddish.

Embolium and cuneus distinctly pilose, scutellum coarsely rugose transversely.

Male: Unknown.

Holotype: female, NEW BRITAIN: Giseluve, Nakanai Mts. 1 050 m, 26 July 1956, E. J. Ford Jr. (BISHOP). *Paratype:* female, Yalom, 1 000 m, 16 May 1962, Noona Dan Expedition, 1961-1962, in the Collection of the Universitets Zoologiske Museet, Copenhagen.

Very close to *Hyalopeplinus rubriniscus* n.sp. but differs by the shape of the lower lateral spot of collar.

***Hyalopeplodes rubriniscus*, n.sp.**

(Figs 113-116, 134)

Characterised by the colour of collar and scutellum.

Female: Length 8.0 mm, width 2.8 mm. *Head:* Length 0.8 mm, width 1.3 mm, vertex 0.56 mm. *Antenna:* Segment I, length 0.8 mm; II, 3.2 mm; III, 1.2 mm; IV, 0.8 mm. *Pronotum:* Length 1.5 mm, width at base 2.2 mm. *Cuneus:* Length 1.00 mm, width at base 0.48 mm (holotype).

General coloration ochraceous with reddish and brown areas; head with a median longitudinal vitta and two lateral ones along inner margins of eyes, a longitudinal vitta on gena and lorum, jugum and

base of clypeus reddish; eyes and antennae brown, segment I reddish; pronotum with three longitudinal brown vittae covered by silvery pruinosity, collar with seven longitudinal vittae as follows: one brownish at middle; two submedian brown to reddish; two more distinct, laterally black; two on lower lateral margin reddish. In some specimens, especially on females, the two lateral vittae of head are followed posteriorly by a corresponding sublateral vitta on collar, calli and disc, between the darker vittae. Mesoscutum and scutellum ochraceous, unicolorous (in some specimens with an indication of a median orange longitudinal vitta); hemelytra glassy, transparent, inner and outer margins of corium and nervures of membrane fuscous to brown, embolium and cuneus reddish, membrane hyaline. Underside of body pale yellow, lateral margins of pronotum, lateral vitta on upper margin of propleura (covered with silvery pruinosity), longitudinal vitta on lower margin of propleura following the equivalent one on lorum and extending along side of sternum and upper margin of abdomen reddish; legs pale yellow, apical portion of femora with reddish tinge, hind tibiae reddish, apices of rostrum and tarsi fuscous.

Embolium and cuneus opaque, pilose, pronotum strongly rugose transversely.

Genitalia: Penis (Fig. 114) with membranous lobes provided with sclerotized spines apically. Left paramere (Fig. 115) curved, enlarged apically, with a pointed apex. Right paramere (Fig. 116) simple, also pointed apically.

Female: Similar to male in colour and general aspect, slightly more robust. Pronotal vittae more marked and five in number: three dark to brown and two sublateral reddish.

Holotype: male, NEW IRELAND: Schleinitz Mts. Lelet Plateau, Oct. 1959, W. W. Brandt (BISHOP). **Allotype:** female, same data as holotype. **Paratypes:** two females, Elemkamin, 16 April 1962, Noona Dan Expedition, 1961-1962, in the collection of the Universitets Zoologiske Museet, Copenhagen.

Very close to *Hyalopeplinus neoguineanus* n.sp. but differs by the colour of scutellum. It is also close to *Hyalopeplinus rubrinoides* n.sp. but differs by the colour of collar.

Hyalopeploides similaris, n. sp.

(Figs. 117-120, 124)

Characterised by the colour of head and collar.

Male: Length 7.4 mm, width 2.5 mm. **Head:** Length 0.6 mm, width 1.4 mm, vertex 0.64 mm. **Antenna:** Segment I, length 0.9 mm; II, 3.3 mm; III-IV, broken. **Pronotum:** Length 1.4 mm, width at base 2.3 mm. **Cuneus:** Length 0.80 mm, width at base 0.52 mm (holotype).

General coloration ochraceous to lutescent with black and reddish areas; head with a longitudinal vitta (more marked on vertex) dark, clypeus, a narrow longitudinal vitta on gena and segment I of antenna reddish; eyes and antennal segments II-IV brown to black; pronotum with three longitudinal vittae (covered by silvery pruinosity) dark: the median one reaching middle of collar where it is narrower but not reaching hind margin of disc, the two lateral beginning at posterior margin of calli (also not reaching hind margin of disc); collar with a lower lateral quadrate and characteristic black spot; mesoscutum and scutellum with two submedian vittae (those on scutellum not reaching apex) and two rounded spots at lateral margins of mesoscutum black; hemelytra glassy, transparent, inner and outer margins of clavus, corium, embolium and nervures of membrane brown to black; embolium and cuneus reddish, opaque; membrane hyaline. Underside of body ochraceous, a lateral vitta on

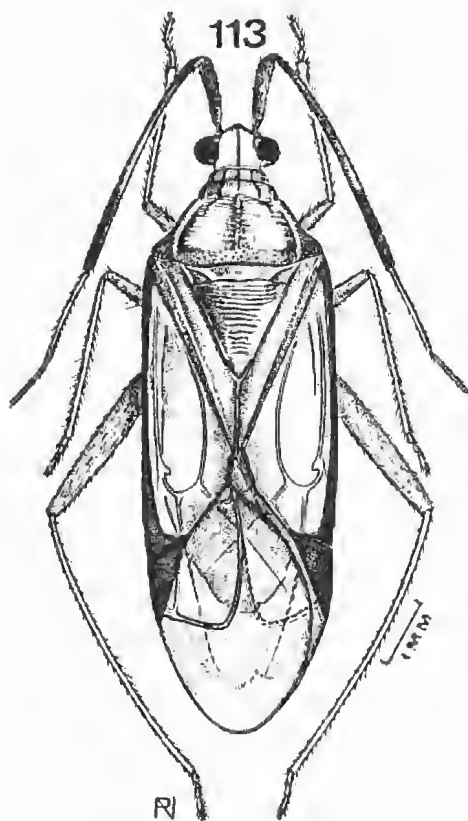


Fig. 113—*Hyalopeploides rubriniscus* n.sp. female, holotype.

abdomen reddish (in some specimens the margin of mesosternum and metapleura dark), legs ochraceous, apices of femora and posterior tibiae brown.

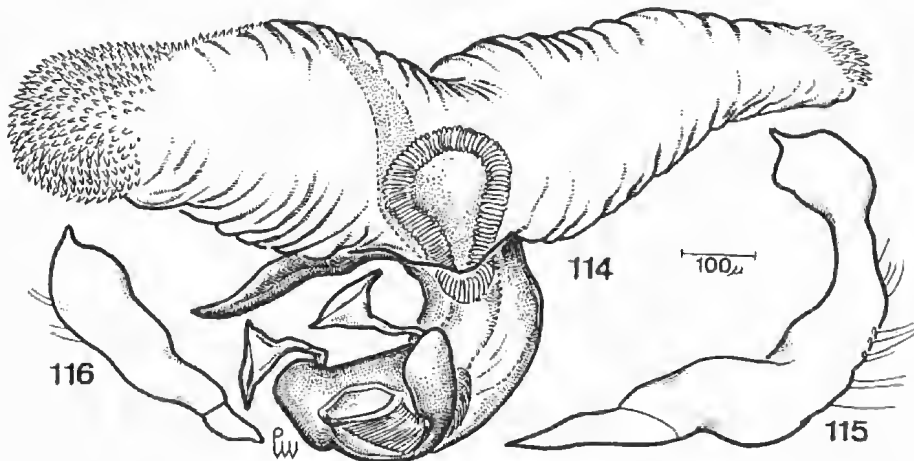
Embolium and cuneus distinctly pilose, opaque.

Genitalia: Penis (fig. 118) with membranous lobes provided with sclerotized spines apically. Left paramere (fig. 119) enlarged apically, with a small pointed tubercle at apex. Right paramere (fig. 120) small, with a short apical somewhat branched tubercle.

Female: unknown.

Holotype: male, SOLOMON ISLANDS: Kolombangara, Gollifer's Camp, 700 m, 23.i.1964, P. Shanahan (BISHOP). **Paratype:** male, same data as holotype.

This species approaches *Hyalopeplinus maculatus* n.sp. but differs by the absence of rounded spots on the disc of pronotum and by the characteristic black lower lateral spot or bar on the collar.



Figs. 114-116—*Hyalopeplodes rubriniscus* n.sp.: Fig. 114—Penis; Fig. 115—Left paramere; Fig. 116—Right paramere.

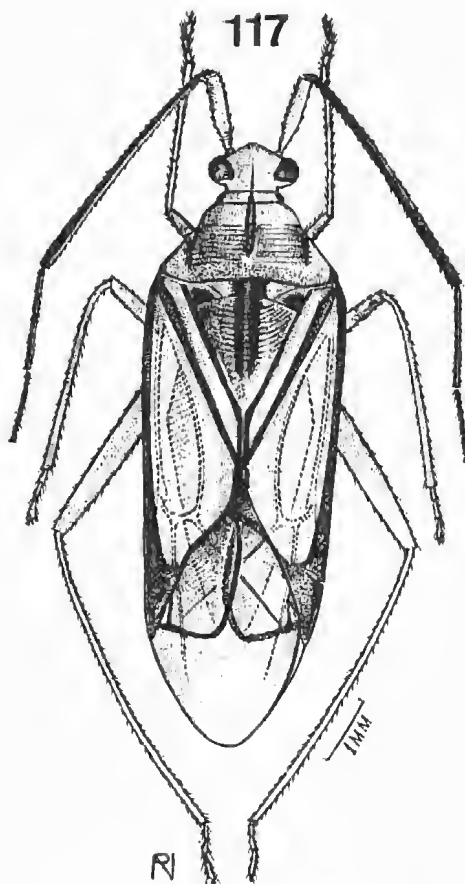


Fig. 117—*Hyalopeplodes similaris* n.sp., male, holotype.

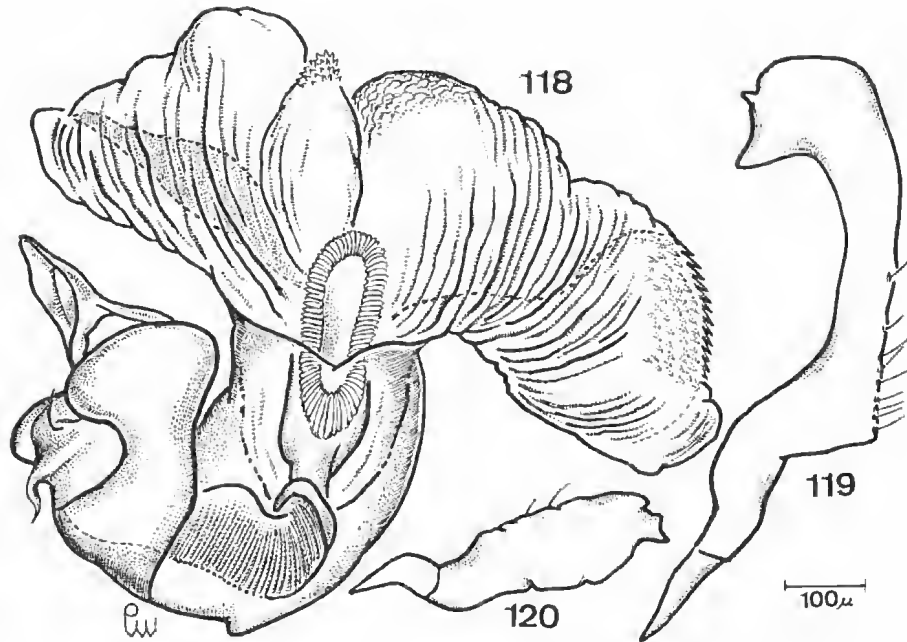
***Hyalopeplodes trinotatus*, n.sp.**

(Figs. 121, 130)

Characterised by the colour of pronotum.

Female: Length 8.1 mm, width 2.3 mm. **Head:** Length 0.6 mm, width 1.3 mm, vertex 0.50 mm. **Antenna:** Segment I, length 1.0 mm; II, 3.2 mm; III-IV, broken. **Pronotum:** Length 1.4 mm, width at base 2.1 mm. **Cuneus:** Length 0.90 mm, width at base 0.44 mm (holotype).

General coloration ochraceous tending to lutescent or orange; eyes and segments II-IV of antenna fuscous to brown; pronotum with three characteristic black strigose vittae or spots on disc: one median and two lateral; extreme humeral angles dark; scutellum with lateral margins black at base, inner and outer margins of clavus, corium (widened towards apical portion) and embolium, commissure and nervures of membrane fuscous to black; cuneus internally red, black at apex, membrane hyaline, fuscous. Underside of body (except black apex of clypeus, epipharynx and valvulae) unicolorous lutescent to reddish; legs pale yellow to lutescent, femora with small fuscous spots on inner apical portion, tibiae light brown, tarsi fuscous apically.



Figs. 118-120—*Hyalopeplodes similaris* n.sp.: Fig. 118—Penis, Fig. 119—Left paramere; Fig. 120—Right paramere.

Pronotum rugose at middle of disc, scutellum rugose longitudinally at central portion, clavus, embolium and cuneus pilose.

Male: Unknown.

Holotype: female, NEW IRELAND: Schleinitz Mts. Lelet Plateau, ix.1959, W. W. Brandt (BISHOP).

This species differs from others in the genus by the colour of the pronotum.

Hyalopeplus Stål, 1870

Hyalopeplus Stål, 1870, p. 670; Atkinson, 1890, p. 106; Distant, 1904b, p. 447; Reuter, 1905b, p. 1; Kirkaldy, 1906, p. 142; Reuter, 1910, p. 158; Poppius, 1912b, p. 2; Carvalho, 1952, p. 97; Carvalho, 1955, p. 107; Carvalho, 1959, p. 319.

Callicratides Distant, 1904b, p. 415; Reuter, 1905b, p. 1.

Type-species: *Capsus vitripennis* Stål, 1855

Body elongate, glabrous or with a few sparse hairs (more visible on cuneus and embolium). Head wider than long, vertex smooth, not marginated, frons rounded anteriorly, clypeus prominent, lorum shelf-like, visible from above, buccula small, rostrum reaching apex of middle or base of hind coxae, segment I reaching middle of xyphus of prosternum; eyes slightly removed from collar (this distance being approximately equal to thickness of segment II

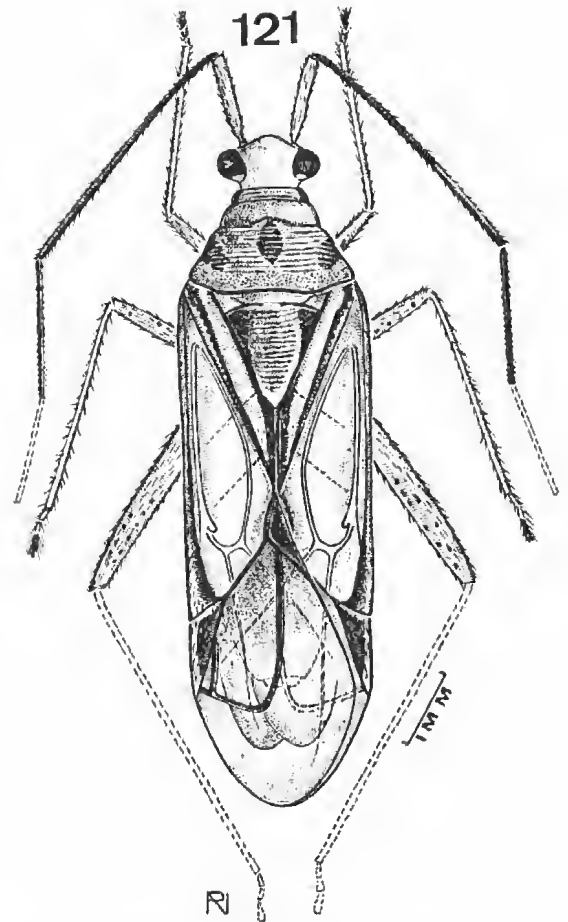


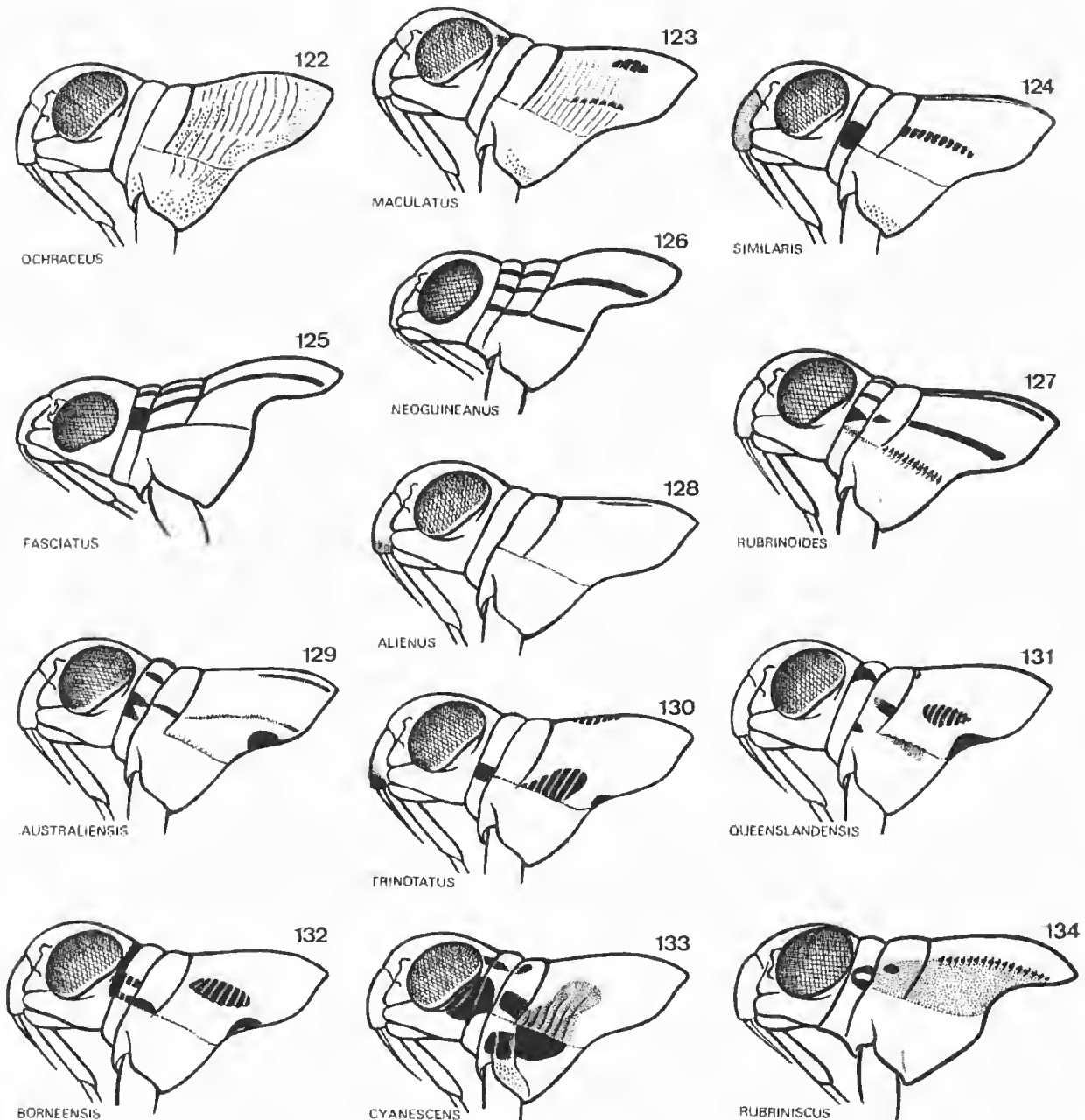
Fig. 121—*Hyalopeplodes trinotatus* n.sp., female, holotype.

of antenna); antenna with segment I about two or three times as thick as II, the latter about five times as long as I, segments III and IV slightly longer than I, all segments with short pubescence.

Pronotum noticeably rugose transversally (typical subgenus)—on collar, rugose, rugose punctate or punctate-rugose on disc, this structure covering the whole disc behind calli and also whole propleura, calli slightly punctate or corrugate, posterior margin of disc slightly immarginated in the middle, humeral angles prominent (somewhat acutely pointed in

some species); mesoscutum partially covered, scutellum prominent, with a longitudinal median transversely rugose fascia and punctures inferiorly on lateral margin.

Hemelytra glassy (transparent), without nervures, the lower wings and abdomen clearly visible from above, clavo-corial and embolio-corial sutures with a row of punctures: membrane vitreous, transparent, the larger cell rounded apically. Legs with tibiae covered by minute sclerotized teeth, hairs and spines.



Figs. 122-134—Lateral view of head and pronotum of species of *Hyalopeplodes* n.gen., showing colour markings: Fig. 122—*ochraceus*; Fig. 123—*maculatus*; Fig. 124—*similaris*; Fig. 125—*fasciatus*; Fig. 126—*neoguineanus*; Fig. 127—*rubrinoides*; Fig. 128—*alienus*; Fig. 129—*australiensis*; Fig. 130—*trinotatus*; Fig. 131—*queenslandensis*; Fig. 132—*borneensis*; Fig. 133—*cyanescens*; Fig. 134—*rubriniscus*.

It differs from others in the tribe by the structure of the pronotum and propleura, corium without nervures, rostrum reaching apex of middle or base of hind coxae, hemelytra glabrous and by the single elongate spiculum of vesica. Its closest allied genus is *Hyalopeplodes* Poppius, 1912 which has the disc of pronotum and propleura rugose only in patches and the pronotum is noticeably constricted anteriorly.

The genus may be subdivided into two subgenera on the structure of pronotum and propleura, and also of the spiculum of aedeagus, and these can be recognized as follows:

1. Disc of pronotum and propleura distinctly rugose transversely, if punctures present obscured by rugosities; spiculum of vesica usually elongate
Hyalopeplus Stål, 1870
- Disc of pronotum and propleura distinctly punctate rugose or punctate, the rugosities obscured by punctures; spiculum of vesica usually enlarged subasally.
Adhyalopeplus n. subgen.

Type-species of new subgenus: Capsus pellucidus
Stål, 1859.

A reddish or reddish-coloured cuneus with the apex of hind femur and hind tibiae partially or totally red are characteristic of many of the species of this subgenus. The first antennal segment in the genus *Hyalopeplus* is usually over 1.0 mm long, while in the new subgenus it is usually less than 1.0 mm long.

List of the species of the genus *Hyalopeplus* Stål

1. **amboinae* Carvalho, 1956 Amboina Is., Babelthuap Is.
= *vitripennis* Stål
2. *aneityumensis* n. sp. New Hebrides
3. **bakeri* Poppius, 1915 Philippine Is.
= *similis* Poppius
4. *clavatus* Distant Bangladesh, Malaya
5. *cuneatus* n. sp. Papua-New Guinea
6. *grandis* n. sp. Philippine Is.
7. *guamensis* Usinger, 1946 Guam Is.
8. *hebridensis* n. sp. New Hebrides
9. **horvathi* Poppius, 1912 Saint Thomé Is.
= *similis* Poppius
10. *kandamensis* n. sp. New Ireland Is., Solomon Is.
11. **krishna* Ballard, 1927 India
= *rama* Kirby, 1891—*Capsus*
12. **lineifer* Walker, 1873—*Capsus* Australia
= *vitripennis* Stål
13. *lariae* Poppius, 1912 Australia, Papua New Guinea
14. *madagascariensis* n. sp. Madagascar
15. *malayensis* n. sp. Malaya
16. *marquesanus* n. sp. Marquesas Is.
17. *nigrifrons* Hsiao, 1944—*Euhyalopeplus*
Philippine Is., Sumatra, Papua New Guinea
18. *nigroscutellatus* n. sp. Philippine Is., Papua New Guinea
19. *pellucidus* Stål, 1859—*Capsus* Hawaiian Islands
20. *rama* Kirby, 1891—*Capsus* Oriental Region, Oceania
21. *rubroclavatus* n. sp. Duncan Is., Irian Jaya
22. *rubrojugatus* n. sp. Papua-New Guinea
23. *samoanus* Knight, 1935 Samoan Is.
24. *similis* Poppius, 1912 Ethiopian and Oriental Regions, Oceania
25. *smaragdinus* Roepke, 1919 Borneo, Java
26. *spinatus* Distant, 1904 Assam, Vietnam

27. *tongaensis* n. sp. Tonga Is.
28. *tutuilaensis* n. sp. American Samoa
29. *vitripennis* Stål, 1855—*Capsus* Oriental Region, Oceania

* Names in synonymy

Key to the species of the subgenus *Hyalopeplus* Stål

1. Hind margin of pronotum with a transverse reddish fascia; clavus totally, or only internal and externally, red 2
- Hind margin of pronotum without a transverse reddish fascia; clavus not red 3
2. Humeral angles spinously produced outwards, reflexed; collar with seven longitudinal fuscous vittae or bars; scutellum castaneous; clavus totally red *rubroclavus* n. sp.
- Humeral angles rounded, collar reddish; scutellum sulphurescent, reddish apically, with a median longitudinal orange vitta; clavus red, pale longitudinally at middle *rubrojugatus* n. sp.
3. Disc of pronotum with two to six round spots, humeral angles and a median longitudinal vitta on disc black 4
- Disc of pronotum without round spots, with or without humeral angles or a longitudinal median vitta black 7
4. Hind tibiae red; segment I of antenna red to dark castaneous; segment II pale *hebridensis* n. sp.
- Hind tibiae pale to ochraceous, segment I of antenna pale or light castaneous; segment II infuscated to black apically 5
5. Pronotum with two black spots behind calli, head with a median longitudinal vitta *marquesanus* n. sp.
- Pronotum with four to six black spots, situated posteriorly on disc 6
6. Segment II of antenna less than 4 mm long; hind margin of disc with only four black spots (including those of humeral angles) *tutuilaensis* n. sp.
- Segment II of antenna more than 4 mm long; hind margin of disc with six black spots (including those of humeral angles) *tongaensis* n. sp.
7. Scutellum and mesoscutum black; area of calli and a transverse fascia on hind margin of disc fuscous to black; general coloration orange to ochraceous *nigroscutellatus* n. sp.
- Scutellum and mesoscutum not black; pronotum and body otherwise coloured 8
8. Mesoscutum with black round spots at lateral fossae (one at each side) 9
- Mesoscutum without black round spots at lateral fossae 10
9. Head with three longitudinal black vittae; collar with five bars or vittae; humeral angles noticeably pointed; embolium and cuneus ochraceous *smaragdinus* Roepke
- Head without dark vittae; collar with only two lateral black bars, humeral angles rounded; embolium and cuneus reddish *kandamensis* n. sp.
10. Segment I of antenna black or reddish; scutellum with two black spots subapically; transverse black fascia on hind margin of disc reaching the hind border 11
- Segment I of antenna pale yellow to ochraceous, sometimes with reddish or fuscous dots; scutellum without two subapical black spots; transversal black fascia of hind margin of disc when present submarginal 13
11. Head pale yellow with a narrow longitudinal vitta; segment III of antenna pale on basal half; hind tibiae with short pubescence *guamensis* Usinger
- Head with three longitudinal vittae, sometimes united to leave only two pale areas on vertex; segment III of antenna pale only at extreme base; hind tibiae with long pubescence 12
12. Frons totally black; collar and area of calli mostly black; scutellum largely black at middle *nigrifrons* Hsiao
- Frons pale; collar and area of calli pale yellow, varying in colour; scutellum black only at basal angles and subapically *rama* (Kirby)

13. Humeral angles of pronotum rounded; segment I of antenna and hind femora with reddish or fuscous dots; pronotum with three to five longitudinal dark or reddish vittae mostly visible on collar 14
 Humeral angles spinously produced outwards, prominent; segment I of antenna and hind femora without reddish or fuscous dots; pronotum without longitudinal vittae or when present, not extending beyond calli 15
14. Cuneus reddish at middle; clypeus without a median longitudinal red vitta; size large, over 12 mm long *malayensis* n.sp.
 Cuneus ochraceous; clypeus with a median longitudinal red vitta; size less than 11 mm long *vitripennis* (Stål)
15. Head and collar without longitudinal dark vittae or bars; cuneus reddish internally; species about 12 mm long *grandis* n.sp.
 Head and collar with longitudinal dark vittae or bars; cuneus pale yellow; species below 10.5 mm long 16
16. Calli without longitudinal zig-zag shaped vitta; hind submarginal fascia of pronotum narrow *clavatus* Distant
 Calli with longitudinal zig-zag shaped vittae; hind submarginal fascia of pronotum wide 17
17. Humeral angles strongly produced, pointed and turned backwards; lower lateral vittae of collar much wider than others *spinus* Distant
 Humeral angles not strongly produced, pointed and turned backwards; lower lateral vittae of collar equal to width of others *aneityumensis* n.sp.

***Hyalopeplus* (H.) *aneityumensis*, n.sp.**

(Fig. 135)

Characterised by the colour of collar and pronotum.

Female: Length 10.4 mm, width 2.8 mm. *Head*: Length 1.2 mm, width 1.6 mm, vertex 0.60 mm. *Antenna*: Segment I, length 1.2 mm; II, 4.2 mm; III, 1.6 mm; IV, broken. *Pronotum*: Length 2.0 mm, width at base 2.8 mm. *Cuneus*: Length 1.24 mm, width at base 0.62 mm (holotype).

General coloration ochraceous with reddish areas; eyes and humeral angles black; three longitudinal vittae on head: one median and two lateral along inner margin of eyes and antennal peduncle, nine longitudinal vittae on collar: five continuing irregularly on disc of pronotum without reaching hind margin, two above on propleura (one at each side) and two along coxal cleft I continuing through inferior margin of propleura red. The two fasciae which are aside the longitudinal median fascia of disc are characteristic (zig-zag-shaped). Hemelytra glassy, transparent, embolium and cuneus opaque; antenna pale, segment I with small reddish dots. Underside of body ochraceous, a longitudinal vitta on lorum, lateral spot on mesosternum, median spot on metapleura and longitudinal vitta on abdomen red; apices of segments II and III of antenna dark brown.

Male: unknown.

Holotype: female, NEW HEBRIDES: Aneityum, xi.1930, L. E. Cheesman, B. M. 1931-127 (BMNH).

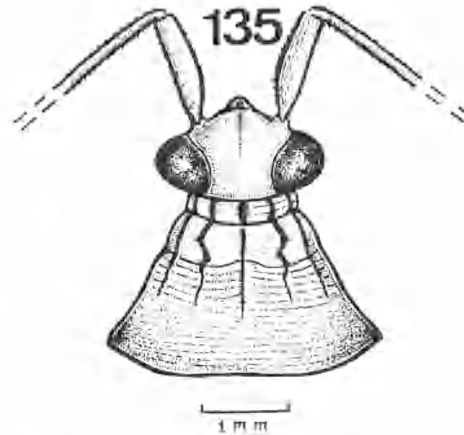


Fig. 135—*Hyalopeplus aneityumensis* n.sp., head and pronotum of female, holotype.

This species is close to *Hyalopeplus spinus* Distant, 1904 but differs by the much less produced humeral angles and by the slender lower lateral vitta or bar of collar.

***Hyalopeplus* (H.) *clavatus* Distant, 1909**

Hyalopeplus clavatus Distant, 1909, p. 509; Distant, 1910, p. 250.

(Fig. 136)

Characterised by strongly produced humeral angles.

Female: Length 10.2 mm, width 2.8 mm. *Head*: Length 1.0 mm, width 1.4 mm, vertex 0.64 mm. *Antenna*: Segment I, length 1.2 mm; II-IV, broken. *Pronotum*: Length 1.6 mm, width at base 2.8 mm. *Cuneus*: Length 1.12 mm, width at base 0.56 mm (lectotype).

"Head, pronotum scutellum, and corium bronzy ochraceous; head with three longitudinal black lines, the lateral ones converging anteriorly; antennae with the basal joint bronzy ochraceous, with a more or less distinct piceous line beneath, second joint black, with its base ochraceous (remaining joints mutilated in typical specimens); pronotal collar with the margins and three longitudinal lines black, the central line more prominent, posterior pronotal margin and the posterior angles black; clavus with the inner and outer margins and the suture black; corium with the costal margin area paler and bordered on each side with black; veins piceous; membrane pale olivaceous, subhyaline, the basal area reflecting the darker abdomen beneath, the cellular margins black; body beneath, rostrum, and legs ochraceous; antennae with the basal joint moderately thickened and a little longer than head, second joint slightly thickened and nearly four times as long as first; rostrum reaching the posterior coxae; pronotum with the anterior area subgranulose, the posterior area transversely striate and

centrally longitudinally impressed, posterior angles slightly straightly prominent, scutellum with the disc very finely transversely striate. Length 10 mm."

Male: unknown.

Geographical distribution: Bangladesh, Malaysia.

Specimens studied: female, lectotype (new designation), *Hyalopeplus clavatus* Distant, BANGLADESH: Lebong, 500 ft. (Lefroy), Bengal (BMNH). *Paralectotype*: female, same data as lectotype; id. PENINSULAR MALAYSIA: Kedah, nr. Jitra catchment area, 4.iv.1928.

Distant compares this species correctly with *Hyalopeplus spinosus* Distant, 1904 which has much more produced humeral angles.

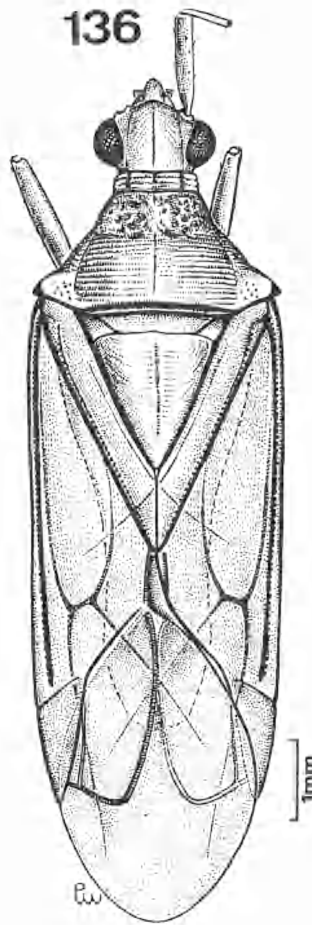


Fig. 136—*Hyalopeplus clavatus* Distant, female, holotype.

***Hyalopeplus* (H.) *grandis*, n.sp.**
(Fig. 137)

Characterised by the large size and by the colour of the body.

Female: Length 12.3 mm, width 3.6 mm. *Head*: Length 1.0 mm, width 1.8 mm, vertex 0.84 mm. *antenna*: Segment I, length 1.8 mm; II, 6.4 mm; III-IV, broken. *Pronotum*: Length 2.0 mm, width at base 3.6 mm. *Cuneus*: Length 1.4 mm, width at base 0.68 mm (holotype).

General coloration ochraceous with black and reddish areas; head with eyes, joints of segments I and II of antenna, apical portion of segments III-IV black (segment II with more than half of basal portion whitish); pronotum with humeral angles black; hemelytra glassy, transparent, inner and outer margins of clavus, corium and embolium, commissure and apical margin of corium, and nervures of membrane castaneous to fuscous; embolium and cuneus opaque, the latter reddish at internal portion, membrane hyaline. Underside of body pale yellow, lateral portion of abdomen with indication of a longitudinal reddish brown vittae, legs pale yellow (hind pair mutilated).

Male: unknown.

Holotype: female, PHILIPPINES: Mt. Province, Mayayao, Ifugao, 1 200-1 500 m, 9.viii.1966, H. M. Torrevillas (BISHOP). *Paratype*: female, Ifugao Prov. Liwo, 8 km E Mayayao, 1 000-1 300 m, 1.vi.1967, H. M. Torrevillas.

Differs from others in the subgenus by its unicolorous head and collar.

***Hyalopeplus* (H.) *guamensis* Usinger, 1946**

Hyalopeplus guamensis Usinger, 1946, p. 58, fig. 13; Carvalho, 1959, p. 320, 1959.

(Figs. 138-142)

Characterised by the colour of pronotum and head.

Male: Length 7.5 mm, width 2.1 mm. *Head*: Length 0.7 mm, width 1.3 mm, vertex 0.56 mm. *Antenna*: Segment I, length 0.9 mm; II, 3.8 mm; III, 1.2 mm; IV, 0.8 mm. *Pronotum*: Length 1.2 mm, width at base 2.0 mm. *Cuneus*: Length 0.88 mm, width at base 0.40 mm.

"Colour yellowish ochraceous with two long, interrupted brown stripes laterally and one short median stripe on tylus, a median longitudinal brown stripe on vertex, seven longitudinal stripes on collar. Brown elsewhere as follows: hind margin of pronotum narrowly, eyes, inner margin of commissure of clavus, veins of hind wings of membrane, and apex of rostrum. Cuneus mostly reddish and costal margin of corium and cuneus light brown to ochraceous posteriorly. Antennae reddish with brown at extreme base and apex of second segment, and ochraceous bases and brownish apices of third and fourth segments. Front and middle legs pale with reddish apices of tibiae and reddish tarsi except for brown apices and claws. Hind femora pale with brown spots and red apices, tibiae and tarsi red with brown tarsal apices and claws."

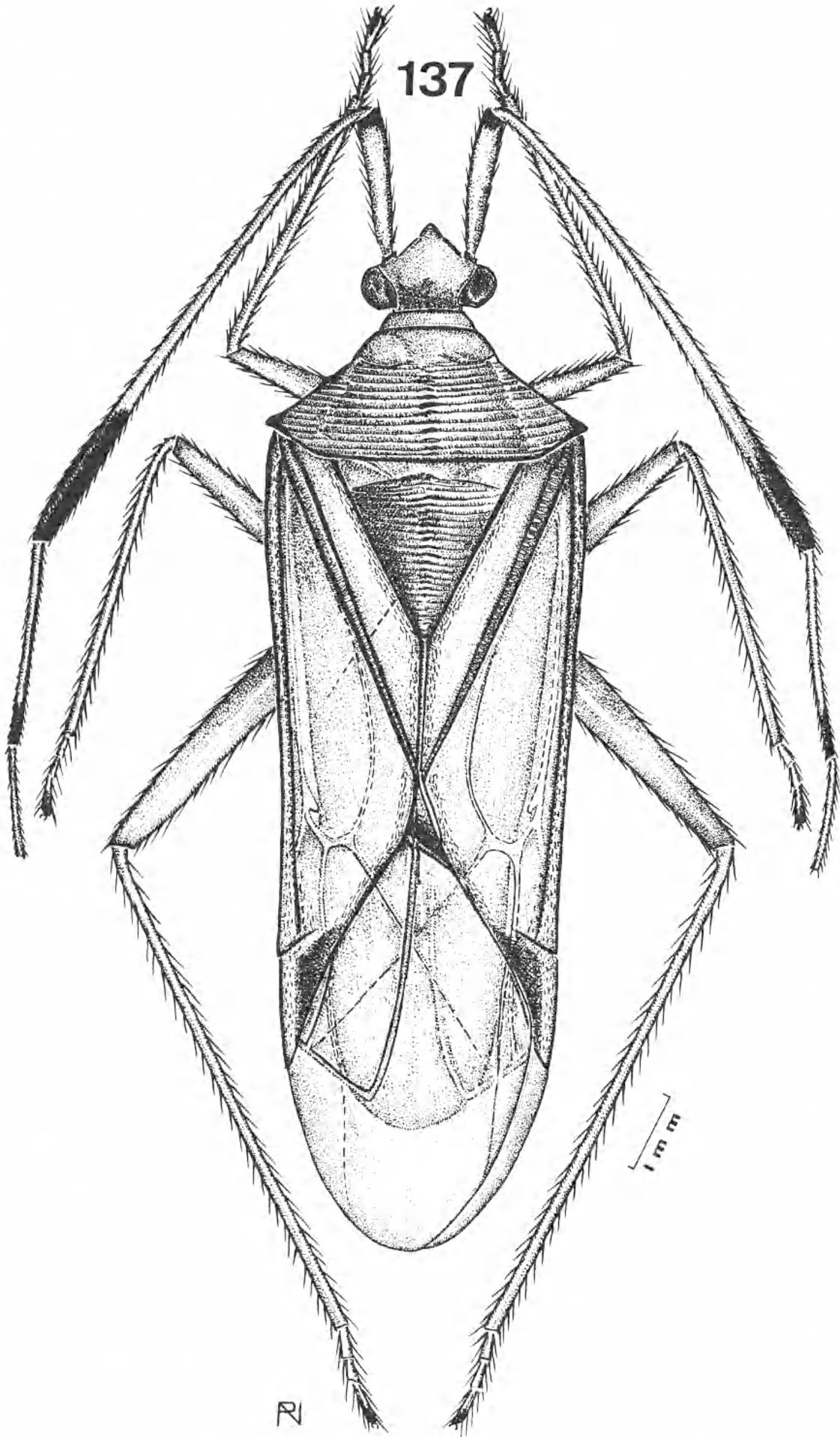


Fig. 137—*Hyalopeplus grandis* n.sp., female, holotype.

Genitalia: Penis (fig. 139) with membranous lobes provided with sclerotized spines apically, a median spiculum (fig. 140) and a group of spines near secondary gonopore. Left paramere (fig. 141) curved, pointed apically. Right paramere (fig. 142) smaller, also pointed apically.

Female: Similar to male in colour and general aspect, slightly more robust.

Host plant: *Thespesia populnea*.

Specimens studied: Five males and females, compared with type, Ft. Oca, Guam, light trap, iv.1945, G. E. Bohard & J. L. Gressitt; Gana, Guam, 15.v.1945, G. E. Bohart (BISHOP).

Usinger (1946), working with Poppius's key (1912) for the species of this genus, compared *guamensis* with *horvathi* Poppius and correctly pointed out that there were sensible differences in the structure of pronotum. Usinger's species is a good representative of the typical subgenus while *horvathi* Poppius represents the new subgenus *Adhyalopeplus*.

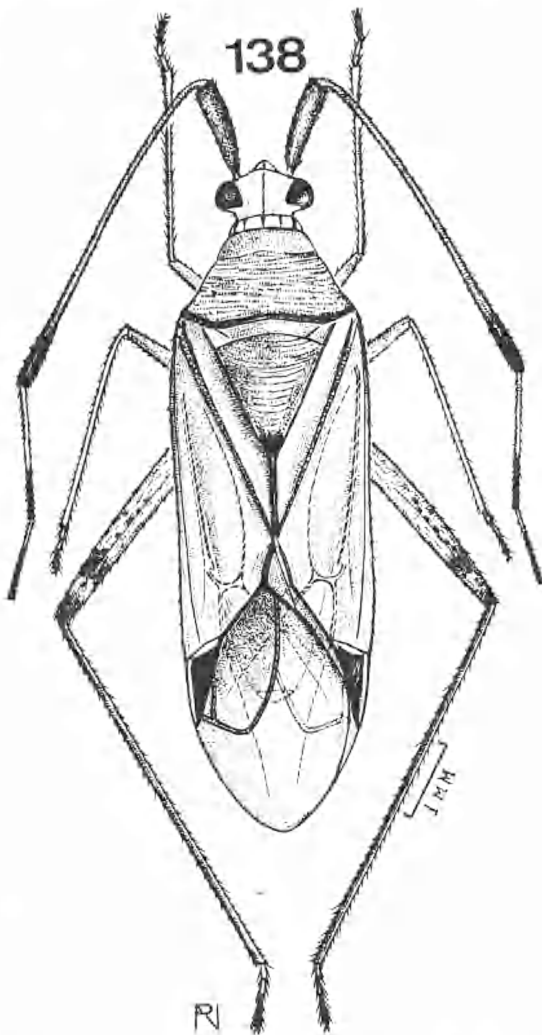
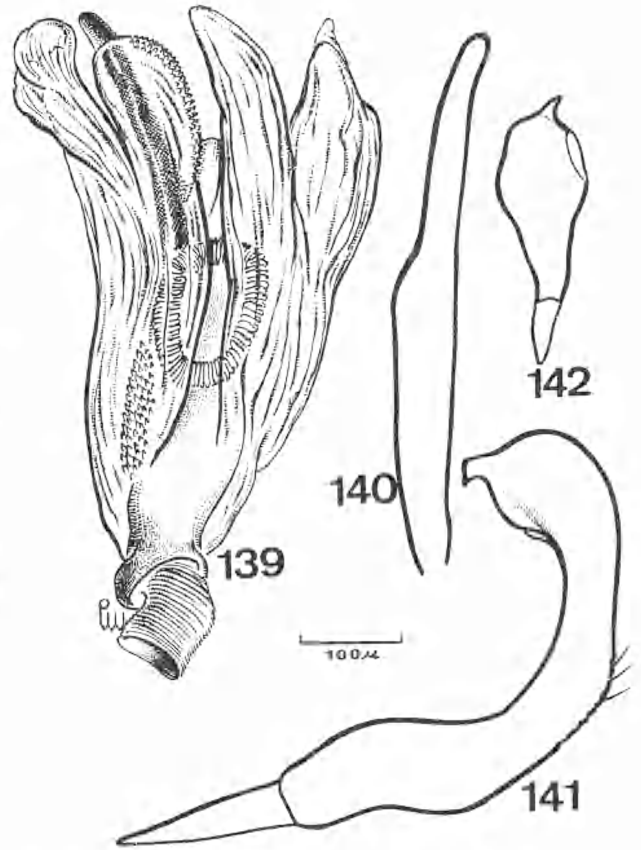


Fig. 138—*Hyalopeplus guamensis* Usinger, female, compared with type.



Figs. 139-142—*Hyalopeplus guamensis* Usinger—Fig. 139—Vesica of aedeagus; Fig. 140—Spiculum of vesica; Fig. 141—Left paramere; Fig. 142—Right paramere.

This species is very close to *Hyalopeplus rama* (Kirby) but differs by having the pronotum citrine to ochraceous without indication of longitudinal lines, by the transverse fascia of posterior portion of disc being very slender and by the much less pubescent hind tibiae. The segments III-IV of antenna are pale in their basal halves while in *rama* only the extreme bases are pale.

***Hyalopeplus* (H.) *hebridensis*, n.sp.**

(Figs. 143-146)

Characterised by the colour of pronotum.

Female: Length 8.8 mm, width 2.6 mm. **Head:** Length 0.7 mm, width 1.5 mm, vertex 0.60 mm. **Antenna:** Segment I, length 1.1 mm; II, 4.6 mm; III, 1.3 mm; IV, 0.8 mm. **Pronotum:** Length 1.6 mm, width at base 2.6 mm. **Cuneus:** Length 1.00 mm, width at base 0.52 mm (holotype).

General coloration ochraceous with dark brown and reddish areas; head with three longitudinal vittae (one central and two along inner margins of eyes), vitta on clypeus and a vitta on jugum, lorum and gena reddish; eyes brown, antenna castaneous to reddish, joints of segments I and II, segments III-IV (except pale basal portion) fuscous to black;

pronotum with collar showing seven longitudinal vittae (the two lower lateral ones narrow and reddish), four rounded spots on disc, humeral angles fuscous to black (in some specimens there is indication of a longitudinal reddish vitta on calli and middle of disc), mesoscutum with a black spot on each lateral fossa, scutellum with an obsolete longitudinal median castaneous line and two black rounded subapical spots; hemelytra glassy, transparent, inner and outer margins of clavus, embolium, corium and cuneus fuscous to brown, the latter reddish internally; membrane hyaline, nervures fuscous. Underside of body pale yellow with a reddish longitudinal vitta present on side of head, coxal cleft, metapleura and side of abdomen; legs pale yellow, hind femora with reddish tinge apically, hind tibiae red, apices of tarsi fuscous. In some specimens the two hind spots on disc become united by a transverse brown fascia.

Pronotum and scutellum transversely rugose, humeral angles pointed, reflexed.

Male: Similar to female in colour and general aspect. Length 8.0 mm, width 2.1 mm, vertex 0.60 mm.

Genitalia: Penis (fig. 144) with membranous lobes provided with groups of sclerotized teeth. Left paramere (fig. 145) curved, pointed apically. Right paramere (fig. 146) small, globose, pointed at apex.

Holotype: male, NEW HEBRIDES: Aneityum, Red Crest, 1 200 ft, 3 mi NE of Anelgauhat, vi.1955, L.E. Cheesman, B.M. 1931-1927. *Allotype*: idem, Erromanga, vii.1930, L. E. Cheesman, B.M. 1930-496. *Paratypes*: 13 males and females same data as holotype and several specimens: Espiritu Santo, Apuna River, camp 3, 270 m, 9-12 Sept. 1971, G. S. Robinson, at light; Malau Village in Big Bay, 14-15 Sept. 1971, G. S. Robinson; Aneityum, at light, Agathis Camp, 19 July 1971, G. S. Robinson, Royal Society-Percy Sladen Expedition (SAM); Espiritu Santo, Narango, 90 m, 7.1960, W. W. Brandt id. SW Namatasopa, 300 m, 29.viii.1957, light trap, J. L. Gressitt; Malekula Is. Lamap, 8-12.ix.1967 (BISHOP).

This species approaches *Hyalopeplus tongaensis* n. sp. but differs by the colour of the segment II of antenna and hind tibiae.

Hyalopeplus (H.) *kandanensis*, n.sp.

(Fig. 147)

Characterised by the colour of the head, pronotum and cuneus.

Female: Length 10.4 mm, width 3.2 mm. *Head*: Length 1.0 mm, width 1.8 mm, vertex 0.80 mm. *Antenna*: Segment I, length 1.0 mm; II, 3.8 mm, III-IV, broken. *Pronotum*: Length 1.9 mm, width at base 2.8 mm. *Cuneus*: Length 1.20 mm, width at base 0.52 mm (holotype).

General coloration ochraceous with brown and reddish areas; eyes and antenna castaneous, segment I reddish; pronotum with collar showing a quadrate spot on lower lateral margin and a spot between calli anteriorly black, three longitudinal obsolete vittae on disc castaneous, mesoscutum with a black spot on each lateral fossa, scutellum infuscated longitudinally at middle; hemelytra glassy, transparent, inner and outer margins of clavus and corium fuscous, embolium and cuneus opaque, reddish; membrane hyaline, nervures brown. Underside of body pale yellow, ostiolar peritreme, longitudinal vitta and middle portion of abdomen reddish, segment IX brownish; legs pale yellow, femora towards apices and hind tibiae reddish, apices of tarsi fuscous.

Pronotum and scutellum noticeably transversely rugose, humeral angles rounded.

Male: unknown.

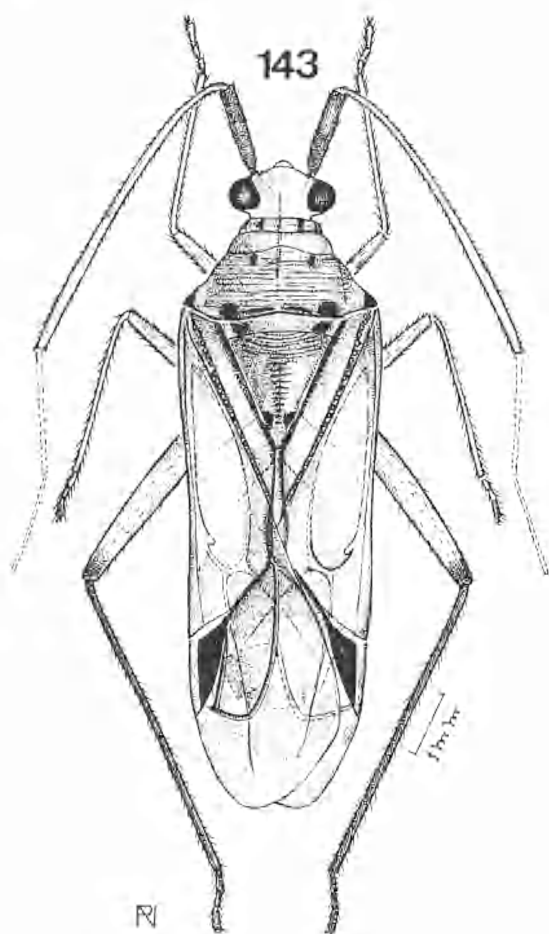
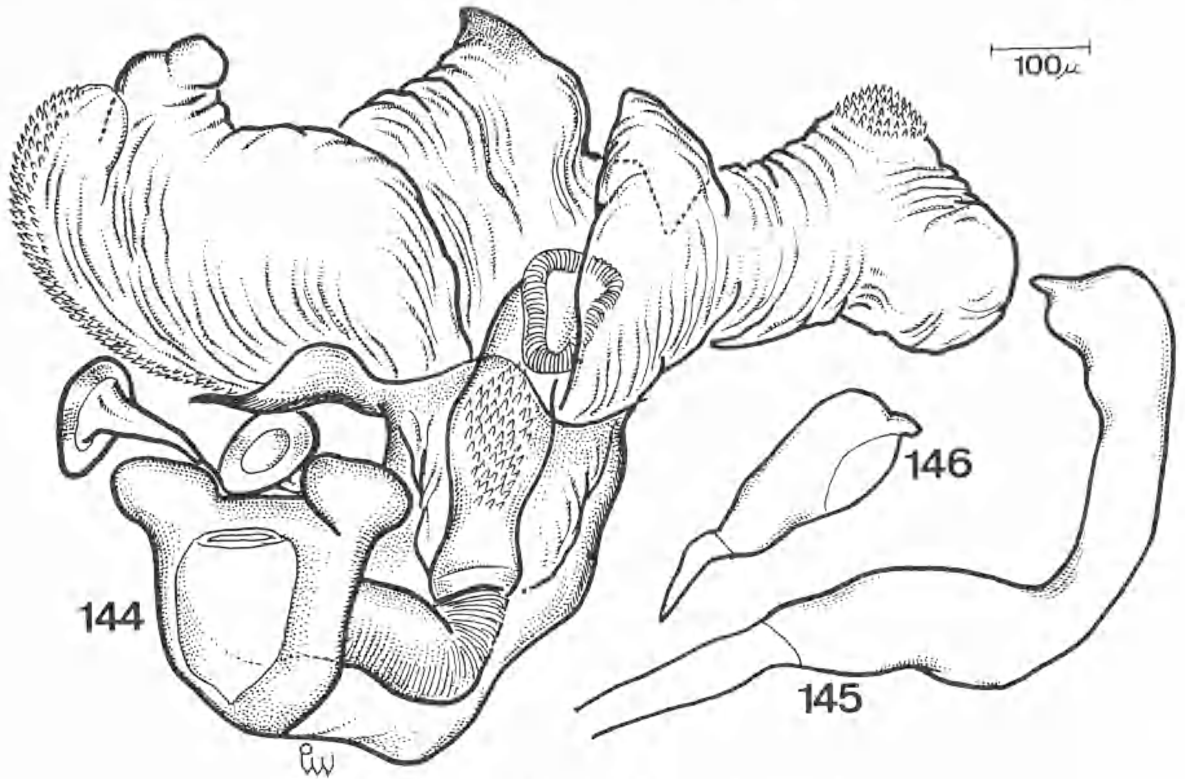


Fig. 143—*Hyalopeplus hebridensis* n.sp., male, holotype.



Figs. 144-146—*Hyalopeplus hebridensis* n.sp.: Fig. 144—Penis;
Fig. 145—Left paramere; Fig. 146—Right paramere.

Holotype: female, NEW IRELAND: Kandan, 24.xii.1959, W. W. Brandt (BISHOP). *Paratype*: SOLOMON ISLANDS: Guadalcanal, Sukakiki R., 22.vi.56, E. S. Brown.

Differs from *Hyalopeplus smaragdinus* Roepke, 1919 by the rounded humeral angles, by the head lacking longitudinal vittae and by the collar having only two dark bars or vittae.

***Hyalopeplus* (H.) *malayensis*, n.sp.**

(Fig. 148)

Characterised by the colour of pronotum and cuneus.

Female: length 13.0 mm, width 2.8 mm. *Head*: Length 1.1 mm, width 1.3 mm, vertex 0.80 mm, *Antenna*: Segment I, length 1.1 mm; II, 4.8 mm; III, 1.6 mm; IV, broken. *Pronotum*: Length 2.1 mm, width at base 2.8 mm. *Cuneus*: Length 1.20 mm, width at base 0.56 mm (holotype).

General coloration ochraceous to lutescent with reddish areas; eyes brown, antenna ochraceous, segment I with small red dots, segment II towards apex and segments III-IV castaneous; three longitudinal vittae on head (one median and two lateral along inner margins of eyes and antennal peduncles) following through pronotum with two others laterally (five vittae altogether) reddish to orange, a submarginal transverse median fascia

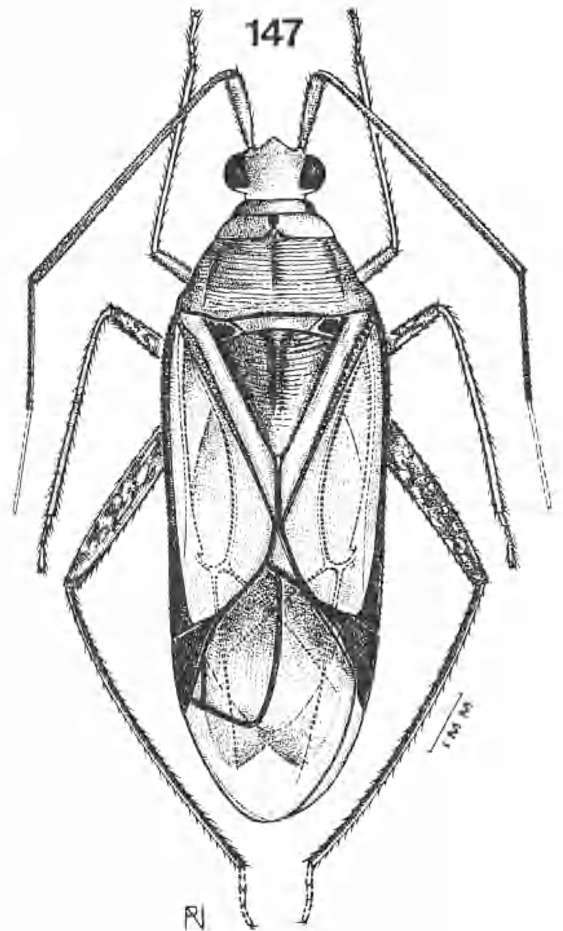


Fig. 147—*Hyalopeplus kandanensis* n.sp., female, holotype.

extending somewhat onto mesoscutum and spot on humeral angles dark brown, hind margin of disc with a narrow fascia contiguous with mesoscutum pale; the latter and scutellum ochraceous to lutescent; hemelytra glassy, transparent, inner and outer margins of clavus, corial commissure and nervures of membrane, inner and outer margins of embolium and outer margin of cuneus castaneous, middle portion of latter reddish, membrane transparent.

Underside of body ochraceous, a spot on jugum, longitudinal vittae on lorum following through gena and inferior portion of propleura, two longitudinal vittae on propleura (median and superior), longitudinal vitta on abdomen and several small spots towards apices of femora reddish.

Male: unknown.

Holotype: female, PENINSULAR MALAYSIA: Pahang, Cameron's Highlands, 4 800 ft, 26.vi.1935, H. M. Pendlebury, Ex. Coll. F.M.S. Museum Natural History (BMNH). *Paratypes:* female, Perak, (F.M.S.), Larut Hills, 4 500 ft, 20 Feb. 1932, H. M. Pendlebury, Ex. F.S.M. Museum, B. M. 1955-354. This species approaches *Hyalopeplus vitripennis* (Stål, 1855) but differs by the reddish colour on cuneus, by its larger size and by the absence of a red longitudinal vitta on clypeus.

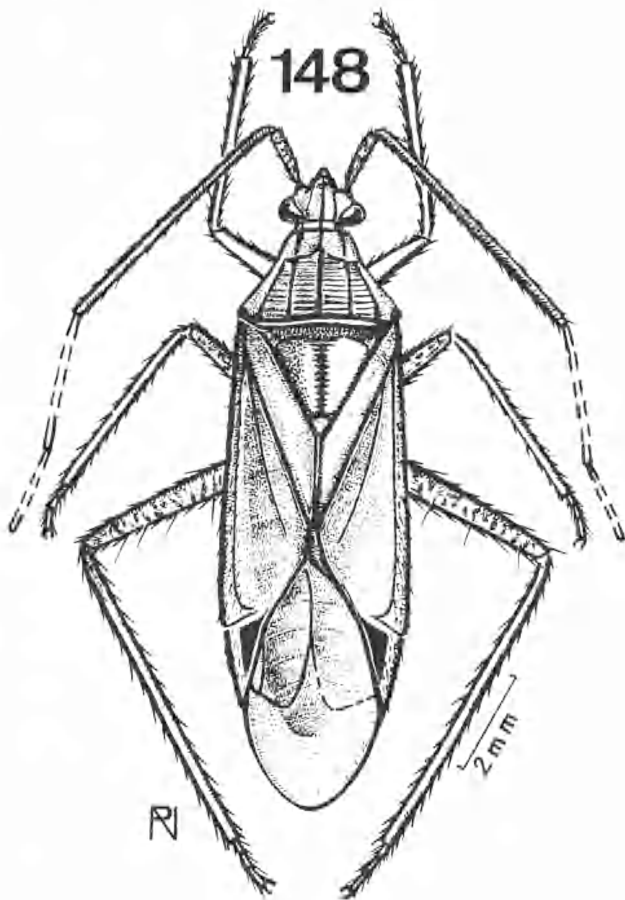


Fig. 148—*Hyalopeplus malayensis* n.sp., female, holotype.

***Hyalopeplus* (H.) *marquesanus*, n. sp.**

(Figs. 149-152)

Characterised by the colour of pronotum.

Male: Length 6.4 mm, width 2.0 mm. *Head:* Length 0.9 mm, width 1.2 mm, vertex 0.60 mm. *Antenna:* Segment I, length 0.8 mm; II, 3.2 mm; III, 1.6 mm; IV, 0.8 mm. *Pronotum:* Length 1.2 mm, width at base 1.8 mm. *Cuneus:* Length 0.40 mm, width at base 0.20 mm (holotype).

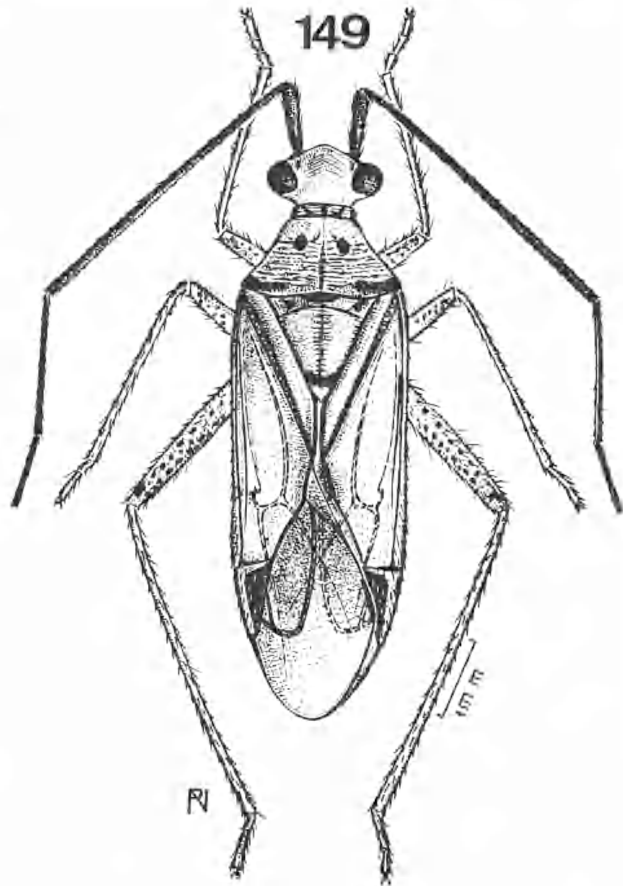


Fig. 149—*Hyalopeplus marquesanus* n.sp., male, holotype.

General coloration ochraceous with brown and reddish areas; eyes and antenna brown, segment I pale towards base with small dark dots inferiorly, clypeus with three vertical fasciae at base, a small spot above antennal peduncle, pronotal collar with three longitudinal vittae above and two lower lateral ones wider and divided at middle, brown; disc of pronotum with two characteristic black spots behind calli; a median longitudinal vitta along surface of disc, humeral angles and area contiguous of hind border (in some specimens only humeral angles) brown; mesoscutum with three median and two lateral spots, scutellum with subapical spot and median longitudinal line infuscate to black; hemelytra glassy, transparent, lateral margins of clavus, commissure and apical margin of corium, inner and outer margin of embolium, nervures of membrane,

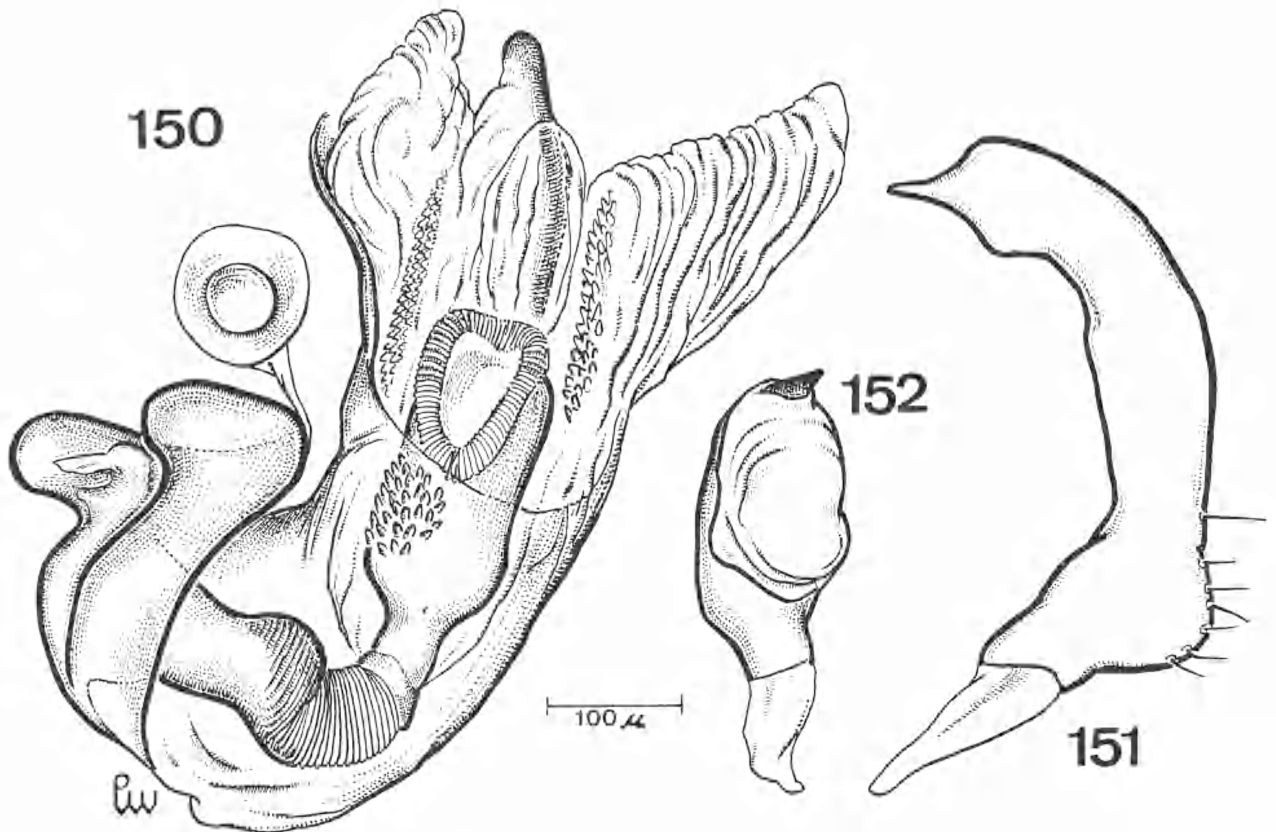
outer margin of cuneus fuscous to brown (in fully coloured specimens cuneal margin red, in teneral specimens cuneus totally ochraceous). Underside of body and legs ochraceous, femora with several brown dots, tibiae with hairs and spines black.

Genitalia: Penis (fig. 150) with membranous lobes with sclerotized teeth apically and a median spiculum. Left paramere (fig. 151) curved, pointed apically. Right paramere (fig. 152) small, also, pointed apically.

Female: Similar to male in colour and general aspect, slightly more robust.

Holotype: female, MARQUESAS ISLANDS: Mohotni, 300 ft, 4.ii.1931, on *Coreopsis* sp. Le Bonnet & H. Tauraa, Pacific Entomological Survey (USNM). **Allotype:** female, Eiao above Vaituha, 1.x.29, 800 ft, biting on *Melochia velutina*, A. M. Adamson, Pacific Entomological Survey. **Paratypes:** Two males and one female, same data as holotype.

The species is similar to *Hyalopeplus tongaensis* n.sp. and *Hyalopeplus tutuilaensis* n.sp. but differs in the structure of the pronotum.



Figs. 150-152—*Hyalopeplus marquesanus* n.sp.; Fig. 150—Penis; Fig. 151—Left paramere; Fig. 152—Right paramere.

Hyalopeplus* (H.) *nigrifrons (Hsiao, 1944), n.comb.

Hyalopeplus nigrifrons Hsiao, 1944, p. 369; Carvalho, 1959, p. 319.

(Fig. 153)

Characterised by the colour of head and scutellum.

Male: Length 9.7 mm, width 2.4 mm. **Head:** Length 0.8 mm, width 1.7 mm, vertex 0.65 mm. **Antenna:** Segment I, length 1.0 mm; II, 4.4 mm; III, 1.9 mm; IV, 1.3 mm. **Pronotum:** Length 1.4 mm, width at base 2.3 mm. **Cuneus:** Length 1.16 mm, width at base 0.60 mm (holotype).

General coloration ochraceous to pale yellow with black areas; "head black, two transverse spots on vertex, a triangular spot behind each eye, a spot at base of antennae, apical third of clypeus, lorum and whole underside of head ochraceous; antennae black; pronotum with collar (except a large spot on each side), calli, a longitudinal median line tapering anteriorly, and basal margin very broadly, black; scutellum black, lateral margins except apical fourth ochraceous; hemelytra glassy, transparent, corium, clavus, margins of embolium, cuneus and veins of membrane dark, embolium and cuneus opaque, the latter reddish; posterior lobe of ostiolar peritreme, posterior legs, side of ventral segments, apex of abdomen, and all third tarsal segments dark".

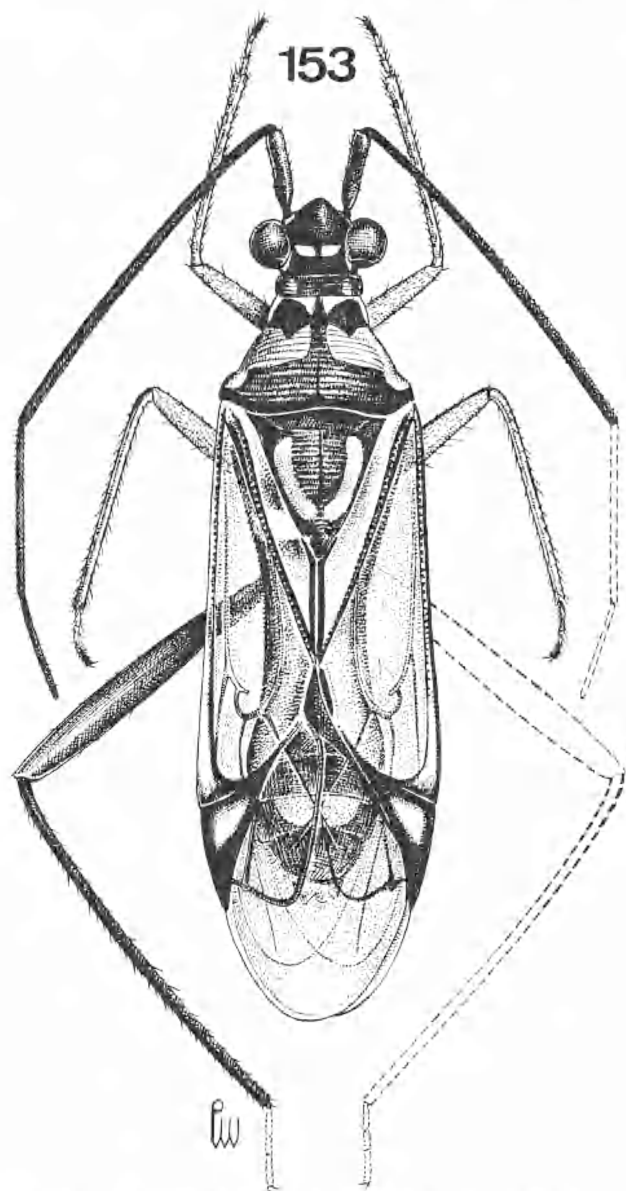


Fig. 153—*Hyalopeplus nigrifrons* Hsiao, male, holotype.

Genitalia: Not dissected since holotype was only male studied.

Female: Similar to male in colour and general aspect. Length 10.2 mm, width 2.8 mm, vertex 0.72 mm.

Geographical distribution: Philippine Islands (Luzon, Mindanao, Negros), Indonesia (Sumatra, Irian Jaya).

Specimens studied: male, holotype, PHILIPPINES: Mt. Mackiling, Luzon, Baker col., *Hyalopeplodes nigrifrons* Hsiao (USNM) together with seven males and females from: Negros Is., Camp Lookout, Dumaguete, 6.iv.-15.v.1961; Mindanao, Lanao, Gerain Mts. 1300 m, 16.v.1958, jungle around swamp. INDONESIA: Sumatra, 1800 m, Dolok Merangir, April-June, 1970, E.W. Diehl, Hollandia, Irian Jaya, L. Sentani, viii-ix, Markos Hart (AMNH and the author's collection).

This species is probably only a dark variety of *Hyalopeplus rama* (Kirby, 1891) with more black colour on head, anterior portion of pronotum and scutellum. The presence of intermediate forms in specimens from the same locality has been found. Only a more careful study however will allow a definite proof on this matter. It can be separated from *rama* by the totally black frons and by the scutellum being extensively black in the middle.

***Hyalopeplus* (H.) *nigroscutellatus*, n.sp.**

(Figs. 154-158)

Characterised by the colour of pronotum and scutellum.

Female: Length 11.8 mm, width 3.1 mm. *Head*—Length 1.0 mm, width 1.8 mm, vertex 0.80 mm. *Antenna*: Segment I, length 1.6 mm; II, 5.1 mm; III-IV, broken. *Pronotum*: Length 1.8 mm, width at base 3.0 mm. *Cuneus*: Length 1.1 mm, width at base 0.72 mm (holotype).

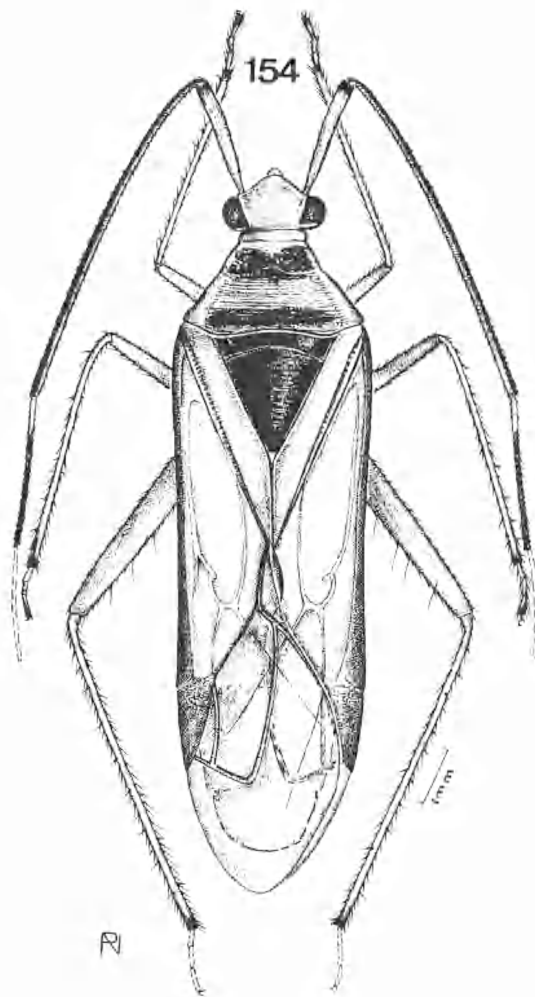


Fig. 154—*Hyalopeplus nigroscutellatus* n.sp., female, holotype.

General coloration orange to ochraceous with brown and reddish areas; head and pronotum ochraceous eyes and antenna (except base of segment I) fuscous to black; pronotum with area of calli and a median transverse spot on hind margin of disc fuscous to brown; scutellum and mesoscutum black; hemelytra glassy, transparent, inner and outer margins of clavus and corium fuscous, embolium and cuneus opaque, brown to reddish, membrane hyaline, nervures reddish. Underside of body brick red, mesosternum and ostiolar peritreme, coxae partially fuscous to black; femora reddish, tibiae and tarsi brown to black.

Pronotum and scutellum noticeably transversely rugose, humeral angles prominent, acute reflexed, claval commissure, embolium and cuneus pubescent.

Male: Similar to female in size, coloration and general aspect.

Genitalia: Penis (fig. 155) with membranous lobes provided with sclerotized teeth, vesica with a characteristic spiculum (fig. 156). Left paramere (fig. 157) enlarged subapically, apex acute. Right paramere (fig. 158) less sclerotized ventrally, apex pointed.

Holotype: female, NEW GUINEA: SE Popondetta, 60 m, 3-4.ix.1963, J. L. Gressitt (BISHOP).
Paratypes: five females. NE Torricelli, Mts. Mobitei,

750 m, 1-15.viii.1959, J. L. Gressitt; Kokada, 400 m, 14-16.xi.1965, J. L. Gressitt; male, PHILIPPINES: Leyte, Abuyong, mi S Tacloda, 14.vii.1961.

This species is readily separated from others in the genus by its black scutellum.

Hyalopeplus (H.) rama (Kirby, 1894) Kirkaldy, 1902

Capsus rama Kirby, 1894, p. 106.

Hyalopeplus rama Kirkaldy, 1902, p. 58, pl A, fig. 8; pl. B, fig. 6; Reuter, 1905b, p. 3; Poppius, 1912a, p. 147; Carvalho, 1953, p. 42; Carvalho, 1959, p. 320.

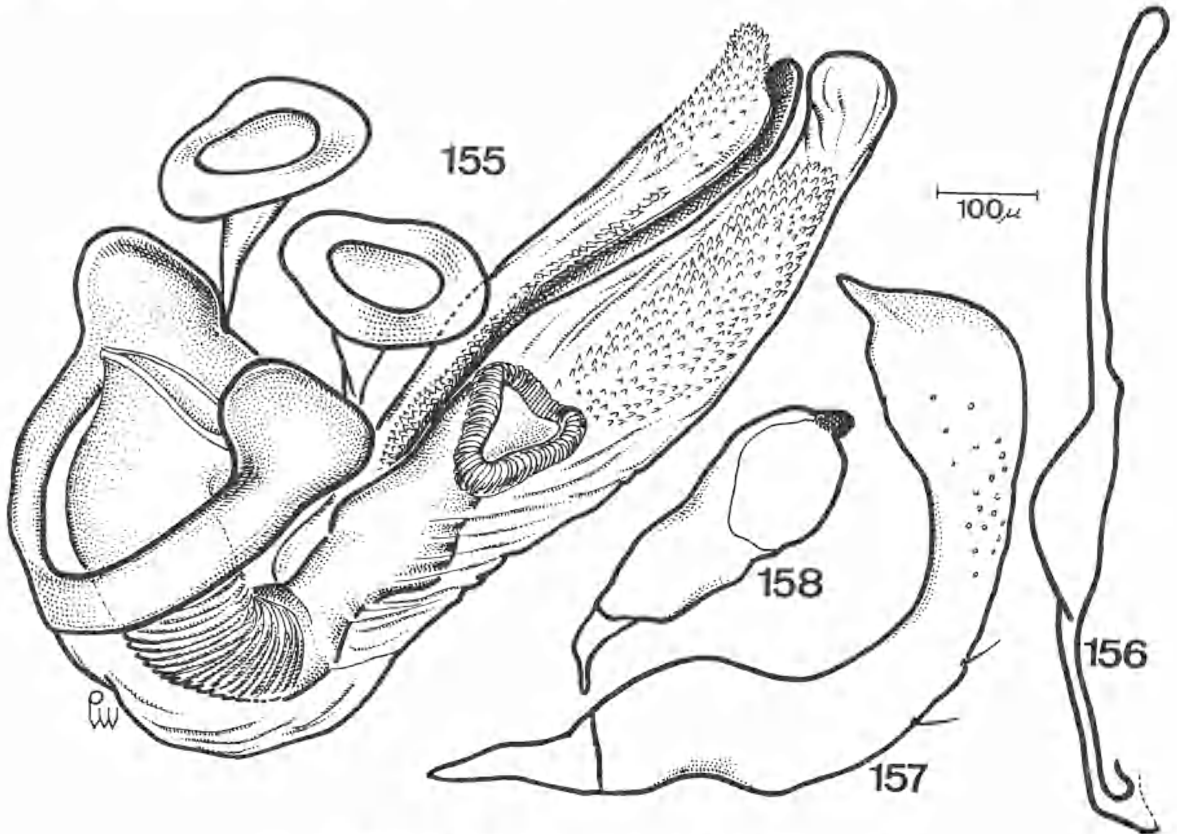
Callicratides rama Distant, 1904b, p. 417, fig. 265; Reuter, 1905a, p. 5, fig. 3; Distant, 1913, p. 174.

Hyalopeplus smaragdinus rubrinus Roepke, 1919, p. 73.

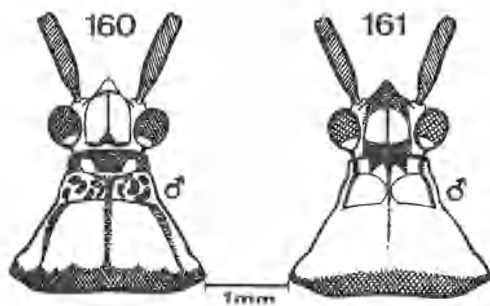
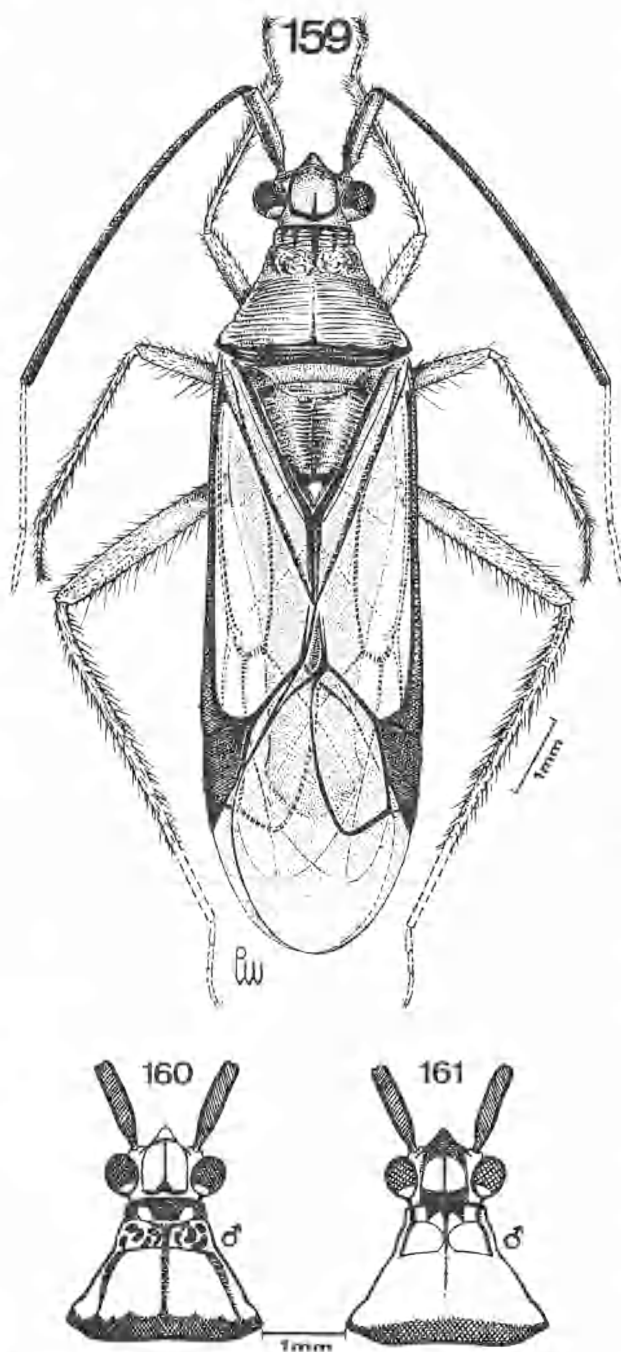
(figs. 159-169)

Characterised by the colour of head and pronotum.

Male: Length 9.6 mm, width 2.6 mm. *Head*: length 0.7 mm, width 1.5 mm, vertex 0.60 mm. *Antenna*: Segment I, length 0.8 mm; II, 4.4 mm; III, 1.4 mm; IV, 1.2 mm. *Pronotum*: Length 1.1 mm, width at base 2.6 mm. *Cuneus*: Length 1.10 mm, width at base 0.44 mm (holotype).



Figs. 155-158—*Hyalopeplus nigroscutellatus* n.sp.: Fig. 155—Penis; Fig. 156—Spiculum of vesica; Fig. 157—Left paramere; Fig. 158—Right paramere.



Figs. 159-161—*Hyalopeplus rama* (Kirby), female, lectotype Fig. 159; Fig. 160, 161—Colour variation of head and pronotum.

"Yellow, vertex with a slender black line between the eyes, and meeting behind them; pronotum blackish at the base, and with narrow black central and marginal lines, or with three short black lines at the base, the central line reddish, and the lateral lines reddish, black only at base; pale part of the pronotum transversely striated, the hinder margin black, the lateral angles not produced. Scutellum transversely striated, more or less black towards the base and extremity, and divided by a deep groove. Wings hyaline, the corium with brown nervures; the costal nervure, and the opaque space at the

extremity of the corium reddish, the latter yellowish in the center. Antennae reddish brown, darker or lighter, the second joint not distinctly thickened, joints 3 and 4 narrowly yellow at base. Legs yellowish, tarsi black, hind femora dotted with brown, hind tibiae red. Under surface of body yellow, with a narrow red line on each side. Pundaloya. Long. Corp. 8-10 mm. Allied to *Capsus lineifer* "Walker" (Kirby, 1894).

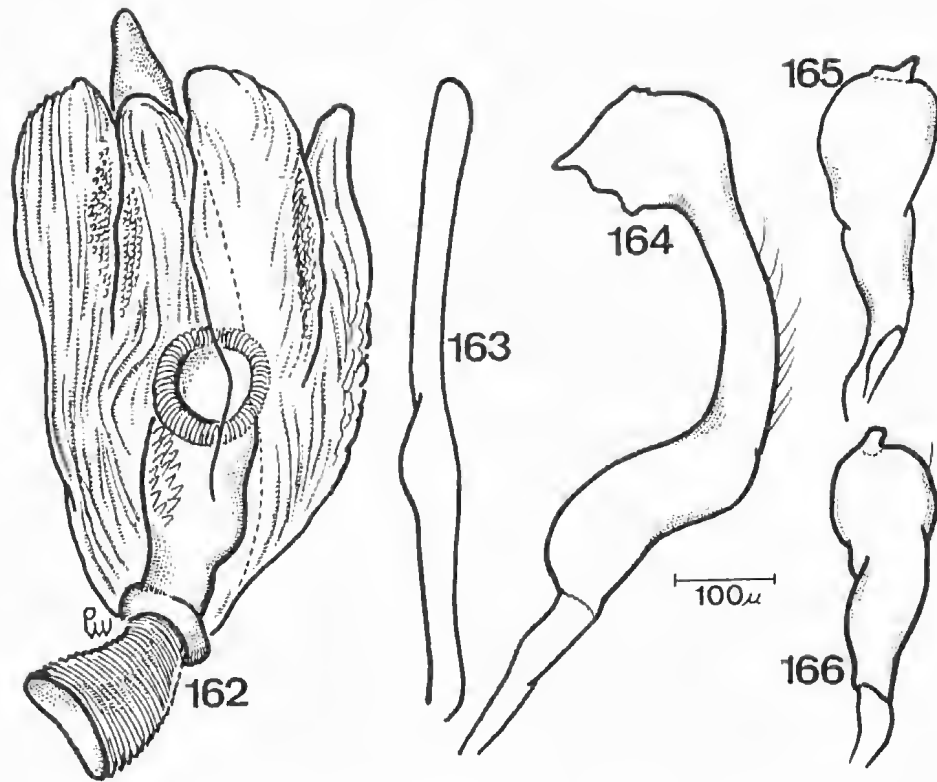
Studies undertaken on the type and fresh specimens from Sri-Lanka (Ceylon) have shown the following characters: general coloration yellow to citrine on head, pronotum and scutellum; glassy and transparent on hemelytra and membrane; antenna brownish to castaneous, segment I tending to reddish; three lines on head: one median (usually interrupted or obsolete) and two lateral along inner margins of eyes, sometimes joined on vertex; seven lines on collar (usually narrowed towards calli) reaching anterior margin of calli, the median one running backwards over disc of pronotum, usually reaching the transverse dark posterior fascia (which covers totally the hind margin of disc and humeral angles) dark to dark brown. The intensity and width of lines and fasciae are variable. Scutellum with extreme basal angles and two spots near apex brown to black, the extreme apex reddish or with reddish tinge; margins of clavus and corium, nervures of membrane and lower wings brown to black; cuneus and embolium reddish (embolium may be brown or pale at base), membrane vitreous. Underside of body yellow to citrine, a longitudinal reddish line laterally on head below eye which may be obsolete at side of sternum and abdomen. Legs pale yellow, hind femora with rows of brownish dots, apex of anterior and median tibiae, apical portion of hind femur (variable) and the hind tibiae totally red; tarsi infuscated towards apex.

Eyes usually removed from anterior margin of pronotum, disc transversely rugose, scutellum strigose sulcate longitudinally and distinctly longer than wide at base, rostrum reaching apex of middle coxae, hind tibiae densely pilose, length of hairs equal to or longer than width of tibia.

Genitalia: Vesica of aedeagus (fig. 162) with membranous lobes provided with sclerotized teeth apically and one spiculum (fig. 163). Left paramere (fig. 164) curved, enlarged apically, with an acute apex. Right paramere (figs. 165, 166) smaller, enlarged apically, also with a terminal pointed lobe.

Geographical distribution: Sri-Lanka, Java, Sumatra, Borneo, Malaya, Philippines, Sabah.

Host plants: *Thea sinensis* and *Melafoe* sp.



Figs. 162-166—*Hyalopeplus rama* (Kirby): Fig. 162—Vesica of aedeagus; Fig. 163—Spiculum of vesica; Fig. 164—Left paramere; Figs. 165, 166—Right paramere.

Specimens studied: SRI-LANKA; female, holotype, Pundaloy, Walker det. (BMNH); 3 males and 3 females, Kan Dist., Kandy 1 800 ft, Peak View Motel, 7-14, Jan. 1970, Davis & Rowe; INDONESIA: male, F.C. Drescher, Java: Preanger, N.O.I. Mt. Mocrangrang 1 600 m, ix.1936; female, Blawan-Idjen, H. Luth (USNM); female, Asahan, Sumatra, 1912, Roepke; female, Asahan, S.O.K., on *Melafoc*, iv.'17, Corporal (det. by Leefmans as *H. uncariae* Rpke); two males and six females, Sumatra, W, Roepke; Goenong, Java, Roepke, 1919; Dolok Merangir, Sumatra, E.W. Diehl, April-June, 1970; id. Jan.-Feb. 1972; id. July-Aug. 1971; Central At Jeh, Sumatra, Kotadjane, 400 m, E.W. Diehl; id. 20 m, Kebon Belok, 60 km NW Medan, May 7, 1970; id. Langkat, E. coast, Namoe Dengas Est. col. Jourin; PHILIPPINES: Palawan, Brookes Point Uring, 17 Aug. 1961, Noona Dan Exp. 61-62; Busuanga Is. 4 km San Nicolas, 26.v.1962, H. Holtmann, light trap; id. 21.v.1962; Negros Or. Mt. Talinas, 1 000 m, 29-31.xii.60, at light, H. Holtmann; EAST MALAYSIA Tenompok, 1 460 m Jesselton, 30 mi E, 26-31.i.1959, T.C. Maa; id. 15.ii.1959; Mt. Kinabalu, Mesilau, 14.ii.1964, J. Smart, Royal Soc. Exp. B.M. 1964-250; PENINSULAR MALAYSIA: Pahang, Cameron Highlands, 4 800-5 000 ft, 4-12-1939; Kuala Lumpur, at light, 19.xii.1938, N.C.E. Miller (*Hyalopeplus vitripennis* Stål, N.C. Miller det. 1956).

This species has been confused with *Hyalopeplus vitripennis* (Stål, 1855) but it is readily differentiated by the reddish cuneus and hind tibiae with long hairs, as well as, by the black transversal hind fascia of disc reaching hind border and humeral angles. It has also similarity with the species of the subgenus *Adhyalopeplus* n. subgen. but can be differentiated by the well marked transverse rugosities of pronotum and scutellum obscuring punctures.

Hyalopeplus (H.) *rubroclavatus*, n.sp.

(Fig. 170)

Characterised by the large size and by the colour of the clavus.

Female: Length 11.0 mm, width 3.0 mm. *Head:* Length 0.9 mm, width 1.6 mm, vertex 0.76 mm. *Antenna:* Segment I, length 1.2 mm; II, 5.6 mm; III, 1.8 mm; IV, broken. *Pronotum:* Length 1.9 mm, width at base 3.0 mm. *Cuneus:* Length 1.24 mm, width at base 0.64 mm (holotype).

General coloration ochraceous with brown and reddish areas; head above with three longitudinal vittae (one median and two lateral along inner margins of eyes), extreme base and apex of segment I of antenna and eyes fuscous to castaneous; segment II brown, darkened towards apex, segments III-IV black, basal portion of III pale; pronotum

with collar showing seven longitudinal bars or vittae fuscous, posterior margin of disc with a transverse red fascia, humeral angles black; mesoscutum and scutellum castaneous, unicolorous; hemelytra glassy, transparent, clavus, commissure and apical margin of corium, embolium and cuneus internally reddish; membrane hyaline, nervures brown to reddish. Underside of body pale yellow to lutescent, legs pale yellow, hind femora apically and tibiae towards base red.

Bewani Mts., Irian Jaya, ix, 1937, W. Stober, B.M., 1938-177; AUSTRALIA: Dunk Island, H. Hacker, Aug. 1927; same data as holotype, in the collection of the author.

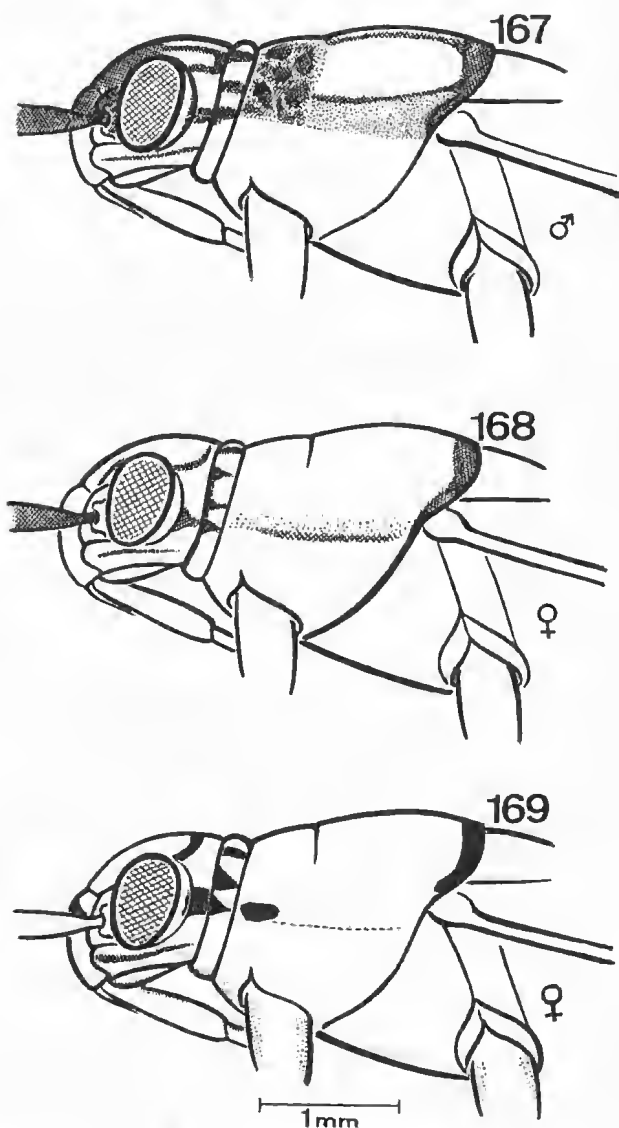
Very close to *Hyalopeplus rubrosignatus* n.sp. but differs by the spinously produced humeral angles, by the collar with dark fasciae or bars and by the unicolorous red clavus.

Hyalopeplus (H.) *rubrojugatus*, n.sp.

(Figs. 171-175)

Characterised by the colour of the jugum, collar and clavus.

Male: length 10.2 mm, width 2.4 mm. *Head*: Length 1.0 mm, width 1.6 mm, vertex 1.04 mm, *Antenna*: Segment I, length 1.4 mm; II 6.2 mm; III, 2.0 mm; IV, broken. *Pronotum*: Length 1.8 mm, width at base 2.4 mm. *Cuneus*: Length 1.00 mm, width at base 0.48 mm (holotype).



Figs. 167-169—*Hyalopeplus rama* (Kirby): Figs. 167, 168, 169—Colour variation of head and pronotum seen from side.

Pronotum rugose punctate, humeral angles prominent, pointed, reflexed, scutellum rugose punctate, hind margin of pronotum slightly concave at middle, embolium and cuneus pubescent.

Male: Unknown.

Holotype: female, AUSTRALIA: Cairns, North Queensland, F.P. Dodd, ex-tree (BMNH). *Paratypes*: 2 females, INDONESIA: Humboldt Bay Dist.

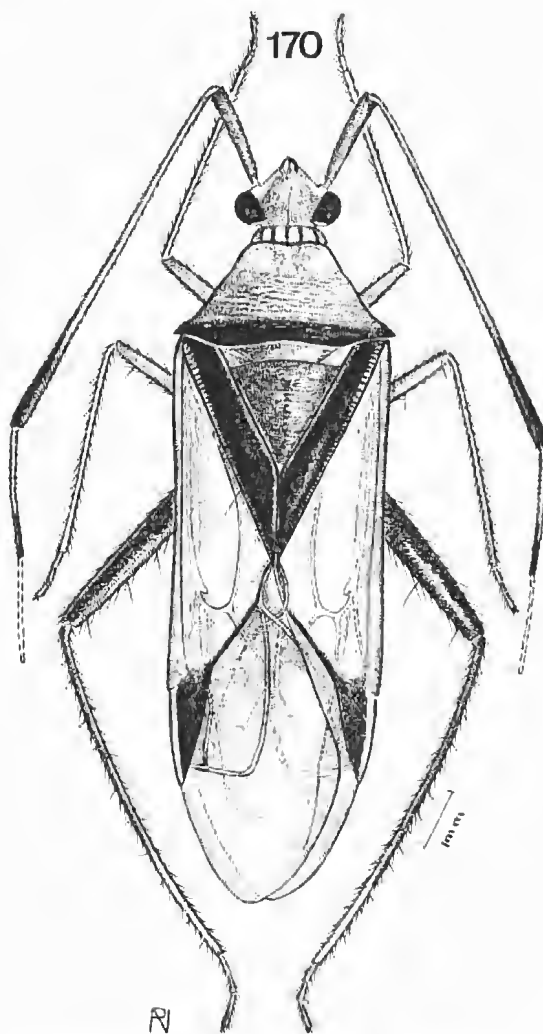


Fig. 170—*Hyalopeplus rubroclavatus* n.sp., female, holotype.

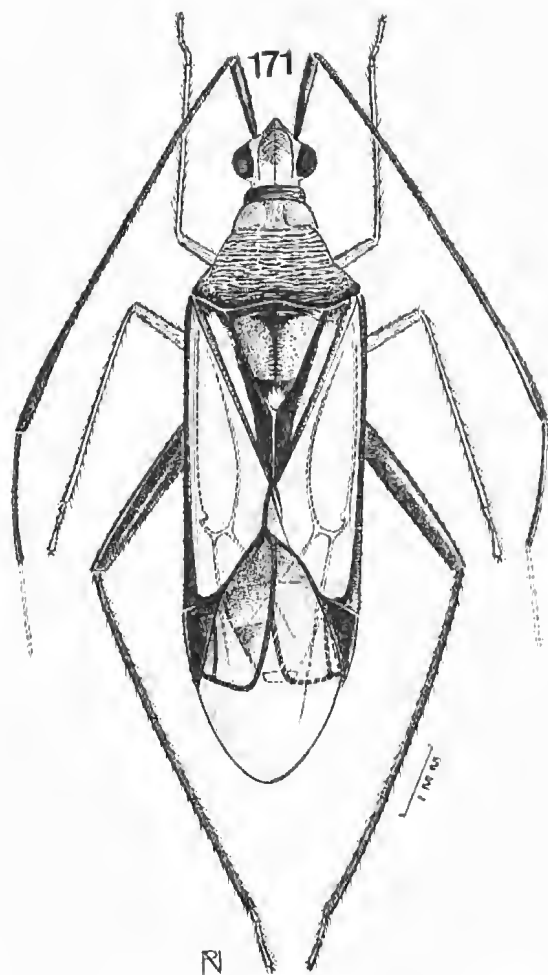
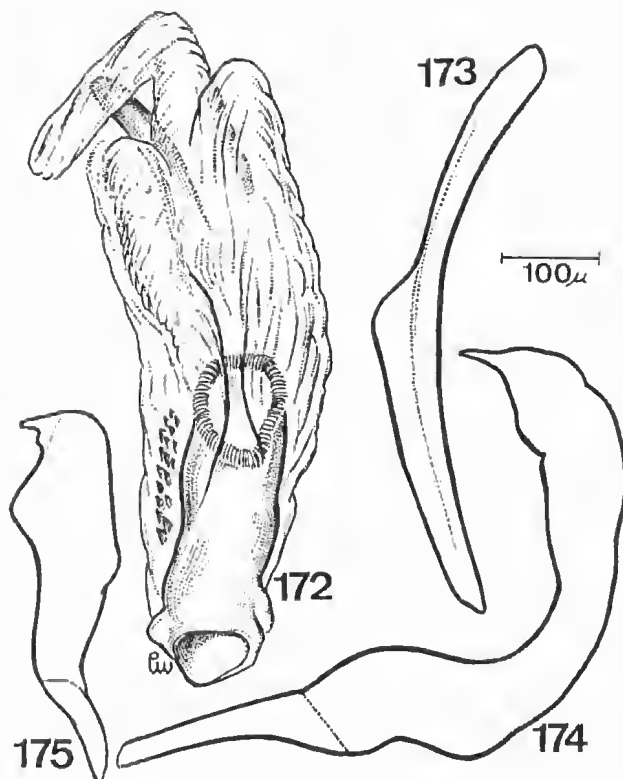


Fig. 171—*Hyalopeplus rubrojugatus* n.sp., male, holotype.

General coloration ochraceous with brown and reddish areas; head with three longitudinal dark brown vittae, the median running over clypeus, sides of the latter, jugum and vitta on lorum reddish; eyes brown, segment I of antenna red, segment II castaneous, reddish towards apex, infuscate to black apically, segments III-IV black, pale at extreme base; pronotum and scutellum lutescent to citrine; collar, a transverse fascia on hind margin of pronotum and apex of scutellum reddish; hemelytra glassy, transparent, clavus red, pale along middle portion, embolium, commissure and apical margin of corium and cuneus red, membrane hyaline, nervures brown. Underside of body pale yellow, apex of abdomen, hind femora and tibiae red, apex of tarsus fuscous.

Pronotum sinuate at posterior margin, humeral angles rounded, second antennal segment very long.

Genitalia: Vesica of aedeagus (fig. 172) with membranous lobes, a sclerotized spiculum (fig. 173) and a group of spines near secondary gonopore. Left paramere (fig. 174) falciform, tapering to extremity. Right paramere (fig. 175) small, with an apical point.



Figs. 172-175—*Hyalopeplus rubrojugatus* n.sp.: Fig. 172—Vesica of aedeagus; Fig. 173—Spiculum of vesica; Fig. 174—Left paramere; Fig. 175—Right paramere.

Femiale: Similar to male in colour and general aspect, slightly more robust.

Holotype: male, INDONESIA: Genjan, 40 km W of Hollandia, Irian Jaya 100-200 m, 1.x1960, T. C. Maa (BISHOP). **Paratype:** male, same data as holotype.

Close to *Hyalopeplus rubroclavatus* n.sp. but differs by the colour of the jugum, clavus and by the rounded humeral angles.

Hyalopeplus (H.) *smaragdinus* Roepke, 1919

Hyalopeplus smaragdinus Roepke, 1919a, p. 173, figs. 1-5; Roepke, 1919b, p. 1, 7 figs.; Corporal, 1920, p. 108; Carvalho, 1959, p. 320.

(Figs. 176-180)

Characterised by the black spots of the mesoscutum, the large size and colour of posterior tibiae.

Male: Length 9.6 mm, width 2.8 mm. **Head:** Length 0.8 mm, width 1.6 mm, vertex 0.76 mm. **Antenna:** Segment I, length 1.4 mm; II, 5.2 mm; III-IV, broken. **Pronotum:** Length 1.6 mm, width at base 2.6 mm. **Cuneus:** Length 1.2 mm, width at base 0.6 mm. **Scutellum:** Length 2.6 mm, width at base 1.6 mm.

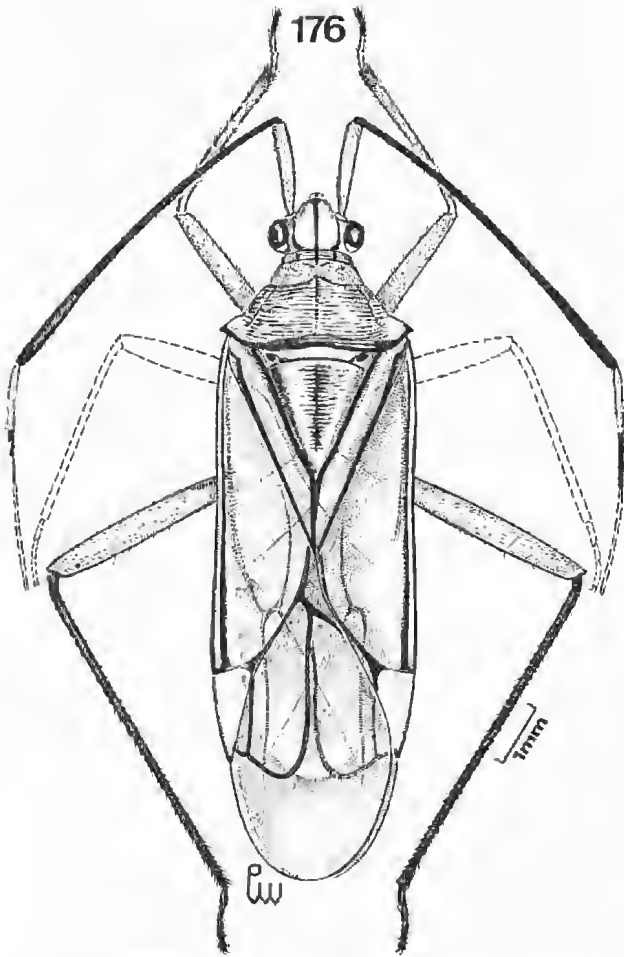


Fig. 176—*Hyalopeplus smaragdinus* Roepke, female, syntype.

According to the original description both males and females are emerald green (bright green) when alive. Antennae dark cineraceous, segment III noticeably pale basally; head above with three longitudinal black lines, convergent anteriorly, the median one stronger; side of head with a longitudinal orange to red vitta which extends to the anal segment without reaching its apex; eyes reddish brown, rostrum light green, valvulae dark brown, apex dark; pronotum anteriorly with three longitudinal black lines, corresponding to those of head and another on lateral margin; hind margin black with humeral angles pointed; scutellum light green margins and central line cineraceous; mesoscutum with two blackish points near lateral corners. Legs greenish cineraceous, apical portions of tibiae and tarsi becoming darkish; abdomen yellow translu-

cent. Hemelytra completely transparent, with black nervures; cuneus yellowish green; membrane unicolours and shining. Antennae with segment I and II slightly thickened, III and IV slender as hairs; head with spherical eyes, strongly prominent, vertex slightly shorter than length of head. Rostrum reaching about the third abdominal segment. Pronotum rugose, with acute humeral angles. Body practically glabrous. "Length of both sexes 9.0-10.0 mm. Tjisampora (Soekaboemi) and Goenoeng Mas (Buitenzorg) about 1 000 m, on tea plantation, Java.

The bugs live on flower buds, especially in old plantations.

The variety described by Roepke as *Hyalopeplus smaragdinus rubrinus* n. form from specimens collected in Goenoeng in tea plants (1918) is undoubtedly a synonym of *Hyalopeplus rama* (Kirby, 1891). All the characters indicated are those of *rama*, especially the reddish embolium and cuneus, as well as the reddish apex of scutellum, apical third of hind femora and also hind tibiae.

The species lives in floral buds of tea. Nymphs reach the adult stage in a period of 9-10 days after six ecdyses. Adults are very delicate and difficult to maintain in captivity.

Genitalia: Penis (fig. 177) with membranous lobes with groups of sclerotised spines and a median spiculum (fig. 178). Left paramere (fig. 179) curved, enlarged apically, with a terminal point. Right paramere (fig. 180) small, globose.

Female: Similar to male in colour and general aspect. Length 10.0 mm, width 2.8 mm, vertex 0.80 mm.

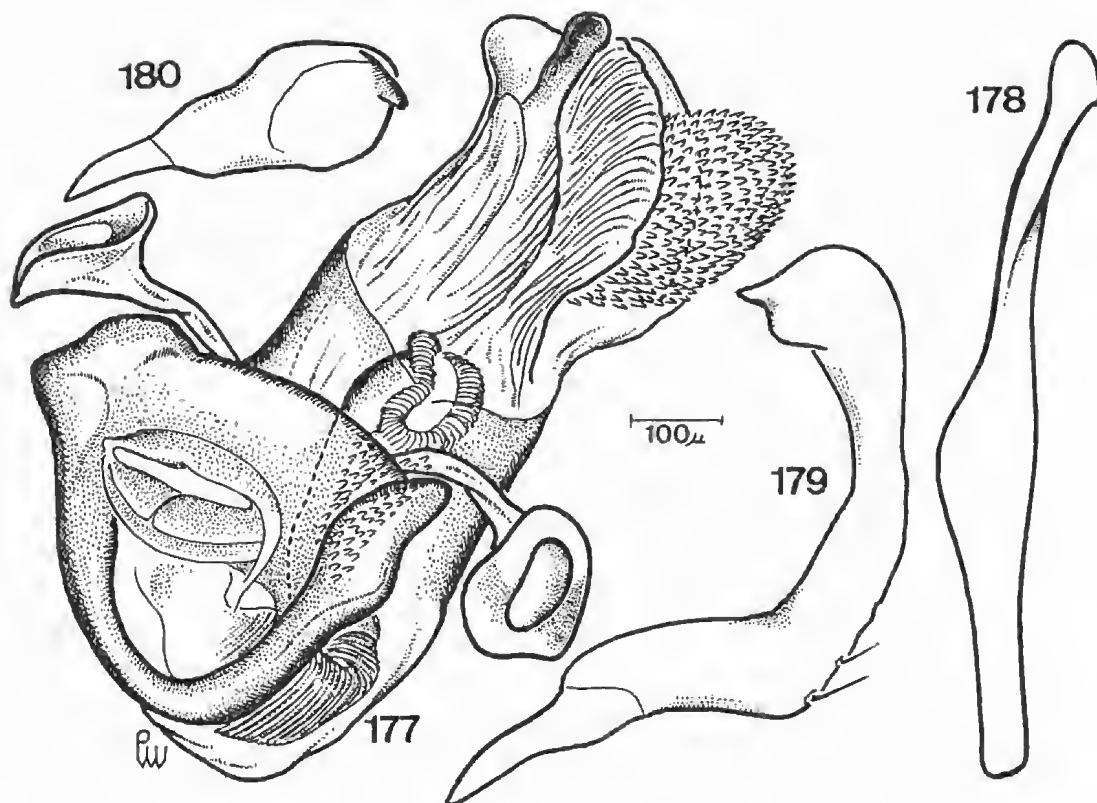
Host plants: *Thea sinensis*.

Specimens studied: INDONESIA: female, Op thee bloemtop, Pd. Gedeh, vi.37, Proefst. us Java, *Hyalopeplus smaragdinus* Ropke (handwriting of Leeftmans?); two females, L.G.E. Kalshoven Java, Mt. Salals, 600 m, 11.i.1925; male, West Java, Ag. Malang, 4290, M.E. Walsh, 13.xii.37; EAST MALAYSIA: female, Bau District, Bidi, 240 m, 2.ix.1958, T.C. Maa.

Geographical distribution: Java, Borneo.

In his second paper of 1919 Roepke presents more data for this species and states that it is not conspecific with *rama* (Kirby). Corporal (1920) gives data concerning fresh coloration.

The two black spots on mesoscutum are characteristic for the species. Its large size and colour of hind legs helps to separate it from allied species.



Figs. 177-180—*Hyalopeplus smaragdinus* Roepke, female. Fig. 177—Penis; Fig. 178—Spiculum of vesica; Fig. 179—Left paramere; Fig. 180—Right paramere.

Hyalopeplus (H.) *spinus* Distant, 1904

Hyalopeplus spinus Distant, 1904b, p. 447; id. Poppius, 1912a, p. 416; Carvalho, 1959, p. 320.

(Fig. 181)

Characterised by the spinously produced humeral angles and by the colour of pronotum.

Female: Length 10.4 mm, width 3.0 mm. *Head*: Length 0.8 mm, width 1.4 mm, vertex 0.72 mm. *Antenna*: Segment I, length 1.2 mm; II, 5.2 mm; III, 1.8 mm; IV, broken. *Pronotum*: Length 1.7 mm, width at base 3.2 mm. *Cuneus*: Length 1.28 mm, width at base 0.56 mm (holotype).

General coloration flavescent to citrine with brownish to reddish areas; head with a median and two lateral longitudinal vittae on vertex which run backwards to pronotum, more visible over collar and calli where the two lines corresponding to those bordering inner margins of eyes are reddish and zig-zag-shaped, the median longitudinal vitta and the submarginal transverse fascia of disc, as well as the humeral angles are castaneous to black; hemelytra with sutures fuscous, embolio-corial margin dark longitudinally, external margin of cuneus and nervures of membrane fuscous. Underside of body

flavescent, a line on side of head, a line or vitta on upper margin of propleura and a vitta laterally on abdomen brown to reddish. Antennae castaneous, segment I paler, with small reddish dots, segment II infusate apically, segment III black apically with basal $\frac{1}{4}$ pale.

Humeral angles strongly spinously produced out and backwards, pronotum distinctly rugose.

Male: Unknown.

Specimens studied: INDIA: female, lectotype (new designation), Margherita, Upper Assam, Doherty (BMNH); id. VIETNAM: Dalat, 1 500 m, 29.iv.-4.v.1960, L. W. Quate.

Geographical distribution: India, Vietnam.

The lectotype is apparently the only remaining specimen of the original series. The legs are not mentioned in the original description. The species approaches *Hyalopeplus clavatus* Distant, 1909 but differs by the transverse submarginal fascia of hind margin of disc being much more distant from border, by the much more spinously produced humeral angles which are somewhat turned backwards and by the colour and shape of the lateral vittae or lines of pronotum.

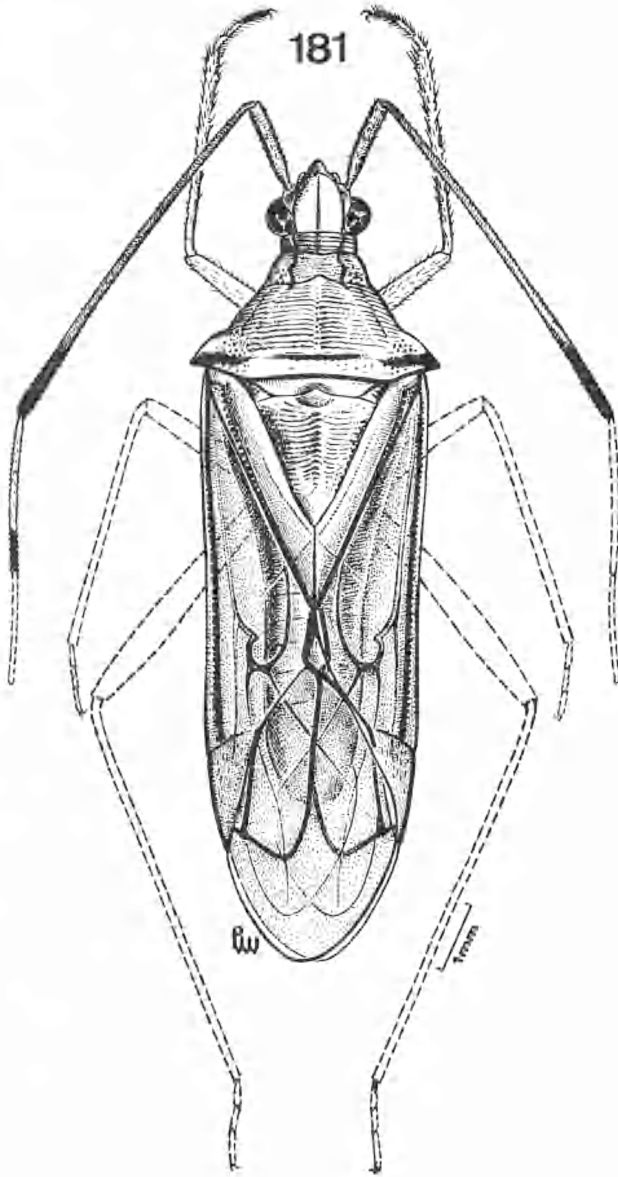


Fig. 181—*Hyalopeplus spinosus* Distant, female, lectotype.

***Hyalopeplus* (H.) *tongaensis*, n.sp.**

(Figs. 182-186)

Characterised by the colour of pronotum, antenna and hind tibiae.

Male: Length 8.0 mm, width 2.2 mm. **Head:** Length 0.9 mm, width 1.4 mm, vertex 0.50 mm. **Antenna:** Segment I, length 1.0 mm; II, 4.7 mm; III, 1.5 mm; IV, 0.8 mm. **Pronotum:** Length 0.9 mm, width at base 2.0 mm. **Cuneus:** Length 0.90 mm, width at base 0.40 mm (holotype).

General coloration ochraceous with brown and reddish areas; head with three longitudinal vittae (one median and two lateral along inner margins of eyes), vitta on clypeus, jugum, lorum and gena brown to reddish; eyes and antenna castaneous, segment I with small fuscous to reddish dots,

segments III-IV black towards apices (segments III-IV pale basally); pronotum with collar showing five longitudinal vittae, the lower lateral one at each side quadrate and large, four rounded spots on disc and humeral angle fuscous to black; In some specimens there is also a median longitudinal vitta and two sublateral ones, between calli and humeral angles with same colour; mesoscutum with a rounded black spot at each lateral fossa, scutellum with an obsolete longitudinal line and two black subapical round spots; hemelytra glassy, transparent, inner and outer margins of clavus, corium, embolium and cuneus fuscous to brown, the latter reddish internally, membrane hyaline, nervures brown to fuscous. Underside of body pale yellow with a reddish vitta on coxal cleft I, a black spot on mesosternum laterally and a reddish vitta on metapleura and sides of abdomen; legs pale yellow, hind femora reddish to fuscous apically with fuscous dots or bars, hind tibiae reddish, segment III of tarsi fuscous.

Pronotum and scutellum transversely rugose, humeral angles acute, prominent, reflexed.

Genitalia: Penis (fig. 183) with membranous lobes provided with sclerotised teeth apically and a spiculum (fig. 184). Left paramere (fig. 185) curved, pointed apically. Right paramere (fig. 186) small, also with pointed apex.

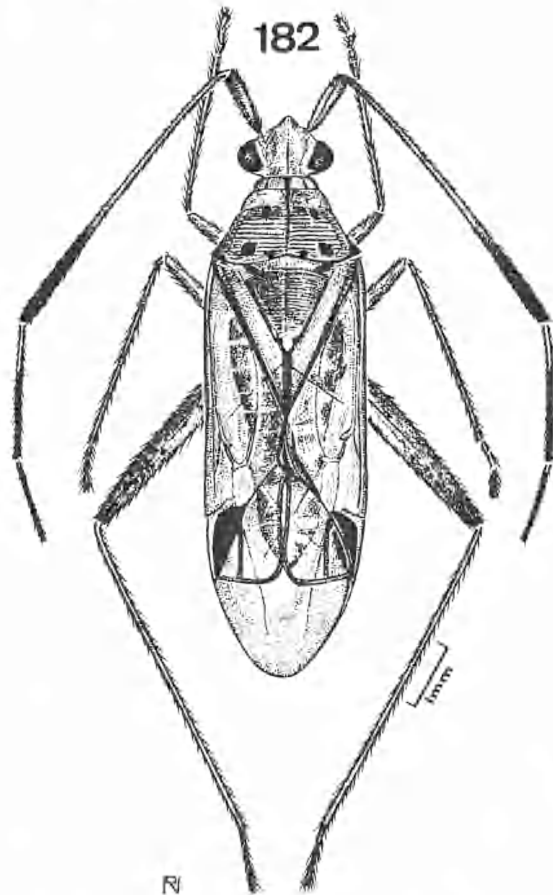


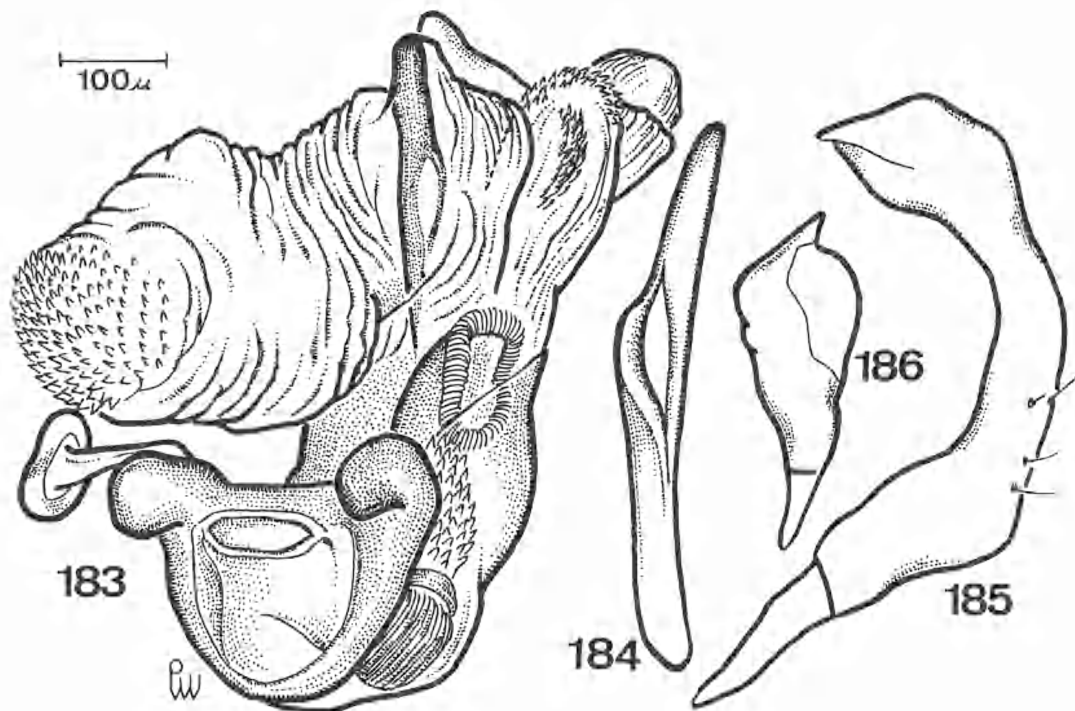
Fig. 182—*Hyalopeplus tongaensis* n.sp., male, holotype.

Female: Similar to male in colour and general aspect. Length 8.3 mm width 2.5 mm, vertex 0.60 mm.

Holotype: male, TONGA ISLANDS: Eua, Pangai, 90-120 m, iii.1969, N.L.H. Krauss (BISHOP). *Allotype*: female, same data as holotype *Paratypes*: two males and two females, Tongatapu, Haatapu, 0-50 m, 11.ii.1969, N.L.H. Krauss; Eua, Parker's Hill

area, 200-300 m, iii.1969, N.L.H. Krauss; 3 males and 7 females, FIJI ISLANDS: Nandarivatu, Viti Levu, 3.vii.1938, E. C. Zimmerman; id. Taviuni, xii.1921, H. W. Simmonds; id. Suva, 29.vii.1923 and 2.v.1923, C. L. Edwards (BMNH).

Very close to *Hyalopeplus tutuilaensis* n. sp. but differs by the colour of second antennal segment and also by the number of spots on the disc of pronotum.



Figs. 183-186—*Hyalopeplus tongaensis* n.sp.: Fig. 183—Penis; Fig. 184—Spiculum of vesica; Fig. 185—Left paramere; Fig. 186—Right paramere.

Hyalopeplus (H.) *tutuilaensis*, n.sp.

(Figs. 187-190)

Characterised by the colour of antenna and pronotum.

Male: Length 6.7 mm, width 2.0 mm. Head: Length 0.6 mm, width 1.3 mm, vertex 0.56 mm. *Antenna*: Segment I, length 0.9 mm; II, 3.9 mm; III-IV, broken. *Pronotum*: Length 1.1 mm, width at base 1.8 mm. *Cuneus*: Length 0.76 mm, width at base 0.44 mm (holotype).

General coloration ochraceous with dark brown and reddish areas; head with three longitudinal vittae (one median and two lateral along inner margins of eyes), obsolete in some specimens, vitta on clypeus, jugum and gena, reddish to brown, eyes brown, antenna pale yellow, apex of segment II, segments III-IV (except pale base) fuscous to black, pronotum with collar showing five longitudinal vittae (three median and two lower lateral larger,

quadrate), disc with median longitudinal vitta and four rounded spots (humeral angles included) fuscous to black. In some specimens the lateral vitta on head follows backwards through collar and calli and there is also a narrow sublateral vitta between calli and humeral angles. Mesoscutum with a black spot on each lateral fossa, scutellum with a fine longitudinal castaneous, line and two subapical round spots; hemelytra glassy, transparent, ochraceous, inner and outer margins of clavus, embolium, corium and cuneous fuscous to black, the latter reddish internally, membrane hyaline, nervures brown. Underside of body pale yellow, a longitudinal reddish vitta laterally beginning on lorum and running backwards, broken at certain points at side of abdomen, a characteristic black, round spot on mesosternum laterally, legs pale yellow, hind femora with dilute fuscous spots or bars, segments III of tarsi fuscous.

Pronotum and scutellum with rugosities, humeral angles acute.

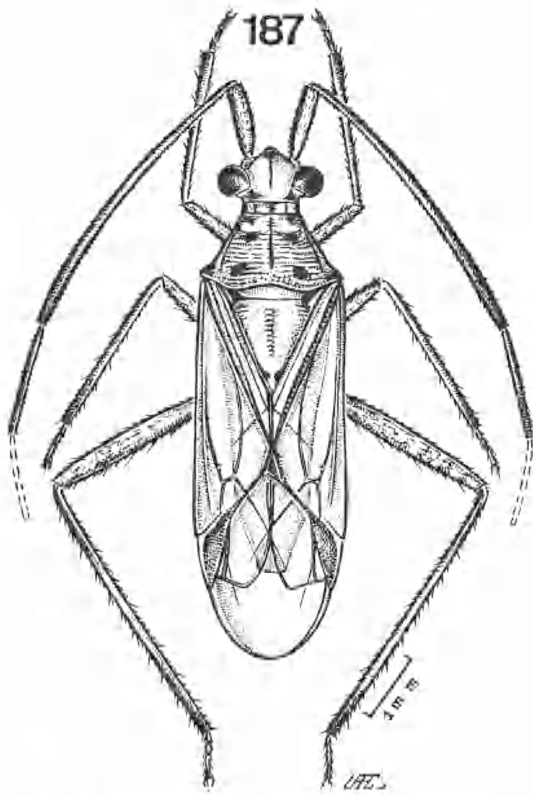


Fig. 187—*Hyalopeplus tutuilaensis* n.sp., male, holotype.

Genitalia: Penis (fig. 188) with membranous lobes provided with sclerotized teeth apically and a sclerotized spiculum. Left paramere (fig. 189) curved, pointed apically. Right paramere (fig. 190) smaller, also pointed apically.

Female: Similar to male in colour and general aspect. Length 8.6 mm, width 2.6 mm, vertex 0.60 mm.

Holotype: male, AMERICAN SAMOA: Tutuila, Taputima, 12.xi. 1963, N. R. Spencer (BISHOP).

Allotype: female, same data as holotype. **Paratypes:** four males and six females, same as data above and 16.ix.1963, 4.iii.1964; Apia Upolu, 2.ii.51, J.S. Armstrong, B.M. 1963-291 (BMNH).

This species approaches *Hyalopeplus tongaensis* n.sp. but differs by the colour of second antennal segment and number of black spots on pronotum.

***Hyalopeplus* (H.) *vitripennis* (Stål, 1855) Stål, 1870**

Capsus vitripennis Stål, 1855, p. 186; Stål, 1859, p. 255; Walker, 1873, p. 118.

Hyalopeplus vitripennis Stål, 1870, p. 671; 1870; Atkinson, 1890, p. 106; Distant, 1904a, p. 108; Distant, 1904b, p. 447, fig. 288; Reuter, 1905b, p. 2; Poppius, 1912a, p. 417; Poppius, 1914, p. 101; Carvalho, 1952, p. 97; Carvalho, 1959, p. 320.

Capsus lineifer Walker, 1873, p. 122; Atkinson, 1890, p. 109; Kirkaldy, 1902c, p. 253.

Hyalopeplus uncariae Roepke, 1916, p. 182, fig. 3; Carvalho, 1959, p. 320 (n.syn.).

Hyalopeplus amboinae Carvalho, 1956, p. 74, figs. 1956 (n.syn.).

(Figs. 191-210)

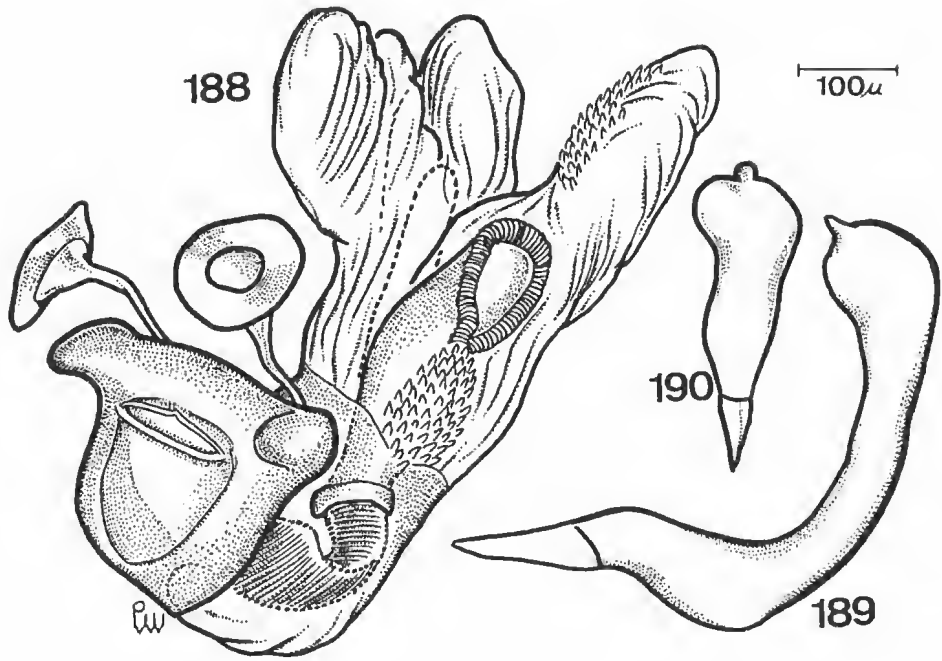
Characterised by the colour of pronotum and cuneus.

Male: Length 7.6-8.0 mm, width 2.4 mm. **Head:** Length 0.8 mm, width 1.2 mm, vertex 0.68 mm. **Antenna:** Segment I, length 0.8-0.9 mm; II, 3.9-4.4 mm; III, 1.2-1.3 mm; IV, 1.0-1.3 mm. **Pronotum:** Length 1.6 mm, width at base 2.3 mm. **Cuneus:** Length 0.86 mm, width at base 0.48 mm.

"Virescenti-flavus; antennis, art. 1 excepto, fuscis; capite thoraceque longitudinaliter rufo-vel ferrugineo-lineatis, hoc etiam linea transversa intramarginali basali nigrofusca; scutelli linea media maculisque 2 apicis brunnescentibus; hemelytris flavo-hyalinis, obscurioribus; femoribus posticis fuscopunctatis; abdominis utrimque linea longitudinalis sanguinea. Lond. 8, Lat. 2.5 mm. Java" (Stål, 1855).

"Luteous; head with three, and pronotum with five longitudinal lines either red or black; scutellum with a central line similarly variable in colour; basal margin of pronotum black; antennae luteous, sometimes (excluding basal joint) fuscous; hemelytra pale ochraceous hyaline, the venation piceous; apex of scutellum more or less castaneous. Length 9 to 10 mm. Assam (Margherita), Ceylon, Tenasserin (Myita), Malacca, Java, Philippines, North Queensland." (Distant, 1904). The figure 288 given for the species is correct.

"Testaceous, fusiform, very finely punctured. Head and pronotum with three black parallel lines the lateral pair abbreviated on the prothorax hindward. Head triangular. Eyes piceous, prominent. Rostrum extending somewhat beyond hind coxae. Antennae piceous, slender, as long as the body; first joint stout, as long as head; second more than thrice as long as the first and less than thrice as long as the third; fourth shorter than the third. Prothorax with two exterior black and red lines on each side, in addition to those before mentioned; transverse furrow extremely slight. Legs rather long and slender. Wings cinereous, veins piceous. Length of body 4 lines. Malacca." (Walker, 1873). The description is rather poor and the pronotum of the holotype is distinctly rugose.



Figs. 188-190—*Hyalopeplus tutuilaensis* n.sp.: Fig. 188—Penis; Fig. 189—Left paramere; Fig. 190—Right paramere.

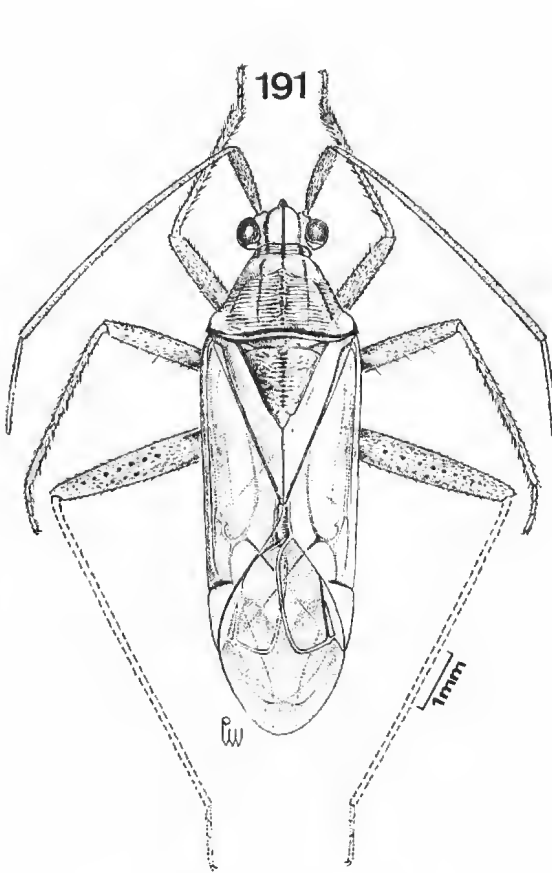


Fig. 191—*Capsus vitripennis* Stål, neotype.

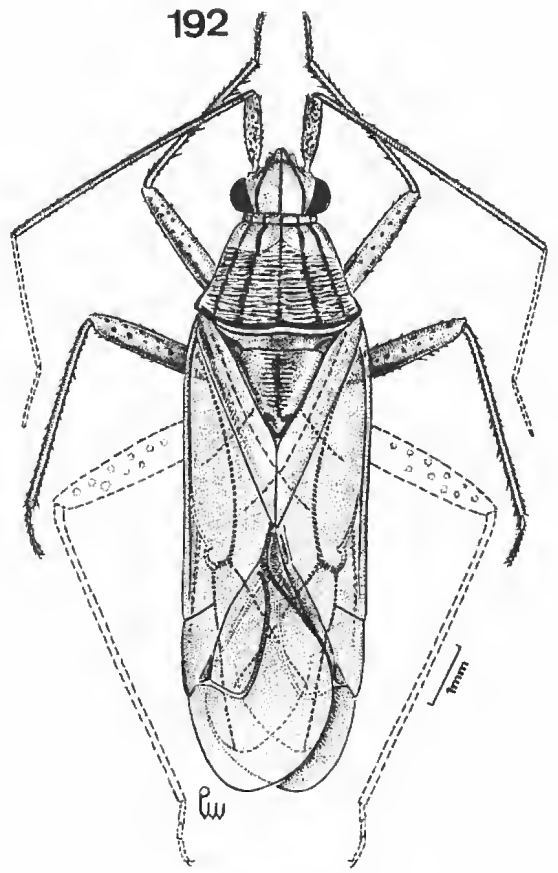


Fig. 192—*Capsus lineifer* Walker, female, lectotype.

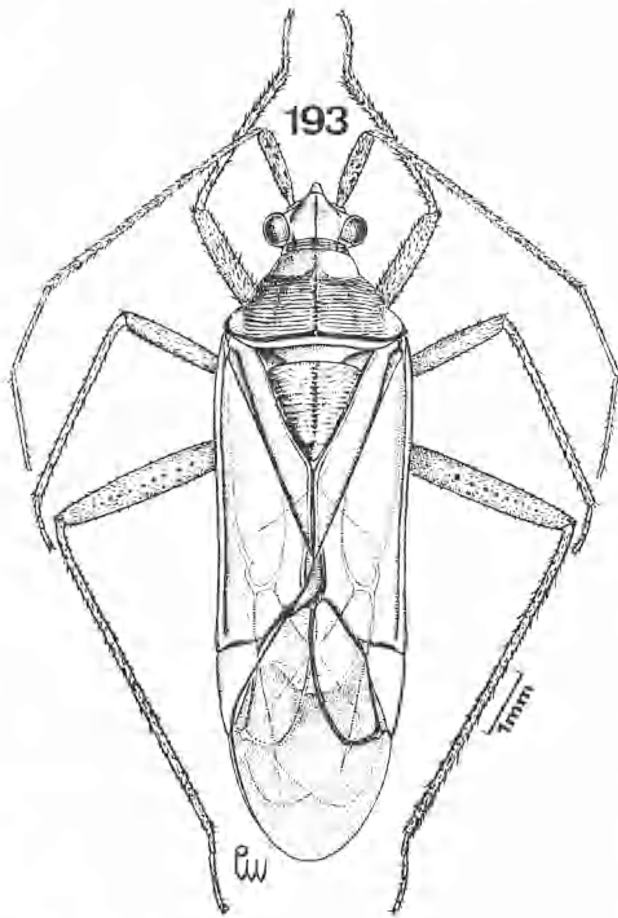


Fig. 193—*Hyalopeplus uncariae* Roepke, female, lectotype.

"Colour citrine to lutescent with glassy, transparent hemelytra; seven longitudinal vittae on pronotum and propleura, the three median ones following those on head, median line and two spots at apex scutellum dark brown to reddish; veins of membrane and extreme apex of cuneus darker; gena with a longitudinal dark stripe, apex of rostrum and veins of membranous wings black; femora with rows of dark or reddish spots, tibiae and antennae with reddish tinge or minute reddish areas." (Carvalho, 1956).

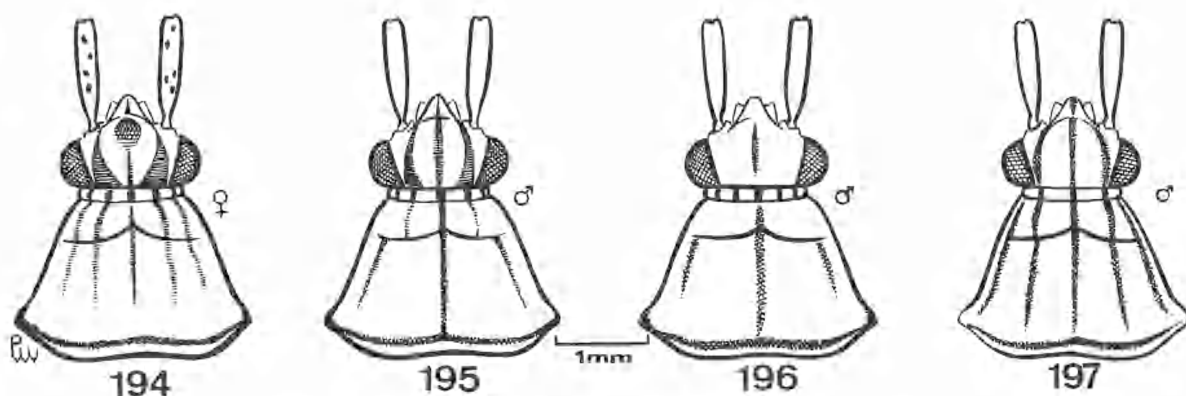
Genitalia: Penis (figs. 203, 207) with vesica of aedeagus provided with membranous lobes with sclerotised teeth apically or in groups and a sclerotised spiculum (figs. 204, 208). Left paramere (figs. 205, 209) curved, pointed apically. Right paramere (figs. 206, 210) smaller, also pointed apically.

Female: Similar to male in colour and general aspect, more robust. Length 8.6-9.4 mm, width 2.4-2.6 mm, vertex 0.72-0.76 mm. **Cuneus:** Length 0.90-1.12 mm, width at base 0.50-0.56 mm.

Host plants: *Thea sinensis*, *Uncaria gambir*.

Geographical distribution: Australia, Indonesia (Amboina, Java, Sumatra), Malaysia (Malacca, Peninsular Malaysia, East Malaysia), Philippines (Babelthup, Papua-New Guinea, Palau Islands, Mariana Islands, Solomon Islands, New Hebrides Islands, New Britain, Bismarck Archipelago, Singapore, Sri-Lanka, Vietnam, Laos).

Specimens studied: 2 females, Ins. Philipp., Semper and Malacca, Kinb. (STOCKHOLM). The Philippine specimens bears Stals handwriting: '*Hyalopeplus vitripennis*'; 10 paratypes of *Hyalopeplus amboinae* Carvalho, Amboina Island and Babelthup Islands (BISHOP): INDONESIA: several males and females; Ambon, 70 m, 29.iii.1963, A.M.R. Wegner; Ambon, Waai, 150 m, 10.i.1964, A.M.R. Wegner; Bogor, Tegalega, Java, 21.xi.1960, P. Maric; Sumatra, Tandjong Morawa, 16.xi.1951, J.V.d. Vecht; lectotype (new designation) of *Hyalopeplus uncariae* Roepke, Asaham, Sumatra, 1912 (Leyden Museum); Pandang, W. Sumatra, xi.1924, C.B.K.; J.B. Corporal, 1920-95, Prse. Imp. Bur. Ent.; 180 m Dolok Merangir, Sumatra, April-June, 1970. E.W. Diehl; Kebon Balok, 20 m, 60 km NW Medan, Sumatra, 7.v.1970; Dairi, 1600 m, NW end of Lake Toba, Sumatra; Eramboe, 80 km ex. Marauke, Irian Jaya, 29.i.1960, T.C. Maa; PENINSULAR MALAYSIA: female, holotype, *Capsus lineifer* Walker, Malacca (BMNH): Selangor Subang Forest Reserve, 90-120 m, 12-14.iii.1958, T.C. Maa. Selangor, Ulugombak, 300 m, 18.v.1958, T.C. Maa; Kuala Lumpur, viii.1958, N.L.H. Krauss (on *Melastoma malabathricum*); West Coast, Langkawi, Is.v.1928, West Coast, Perhentian, vii.1926, ex. F.M.S. Museum, B.M. 1955-354; Penang, King Geo. Nat. Park, 15.xii.1958; EAST MALAYSIA: Tawau Residency, Kalabakan R., 48 km (30 mi) W, 18.ix.1958, T.C. Maa; W. Coast Residency, Ranau, 13 km (8 mi) Paring Hot Springs, 500 m, x.1958, L.W. Quate & T.C. Maa; id. 28.ix.-7.x.1958; 22-25.i.1959; Bundu Tukan, 18.ii.1959; 6.x.1959, T.C. Maa; Sandakan Residency, Gomaton Caves, 32 km (20 mi) s. Sandakan, 22-26.ix.1958, T.C. Maa; Penampang SE of Jesselton, 17.x.1958, T.C. Maa; Singkor, 19.i.1959, T.C. Maa; Tenompok, 1 460 m, 48 km (30 mi) E Jesselton, 17-21.x.1958, T.C. Maa; Sensuron, 9-11.i.1959, T.C. Maa; Pontianak, F. Muir, T.C. Maa; Manorg, F. Muir; Ranau, 22-25.ii.1959, T.C. Maa, Ranau, 13 km (8 mi) N Paring Hot Springs, 500 m, 9-18.x.1958, L.W. Quate; Keningau, 12-17.i.1959, T.C. Maa; SE, Forest Camp, 19 km N of Kalabakan, 60 m, 21.xi.1962; Kuching, Santubong, 797-1500 m, 18-30.vi.1958, T.C. Maa; Merirai V. Kapit Dist. 1-6.viii.1958, T.C. Maa, PHILIPPINES: Minanao, Zamboanga de Norte, 11 km-9 km E of Sindagan, 20.vii.1958, H. E. Mildanao; Bukidon, 1250 m, Mt. Katangland, 4-9.xii.1959, L. W. Quate;



Figs. 194-197—*Hyalopeplus vitripennis* (Stål): Colour variation of antenna, head and pronotum seen from above.

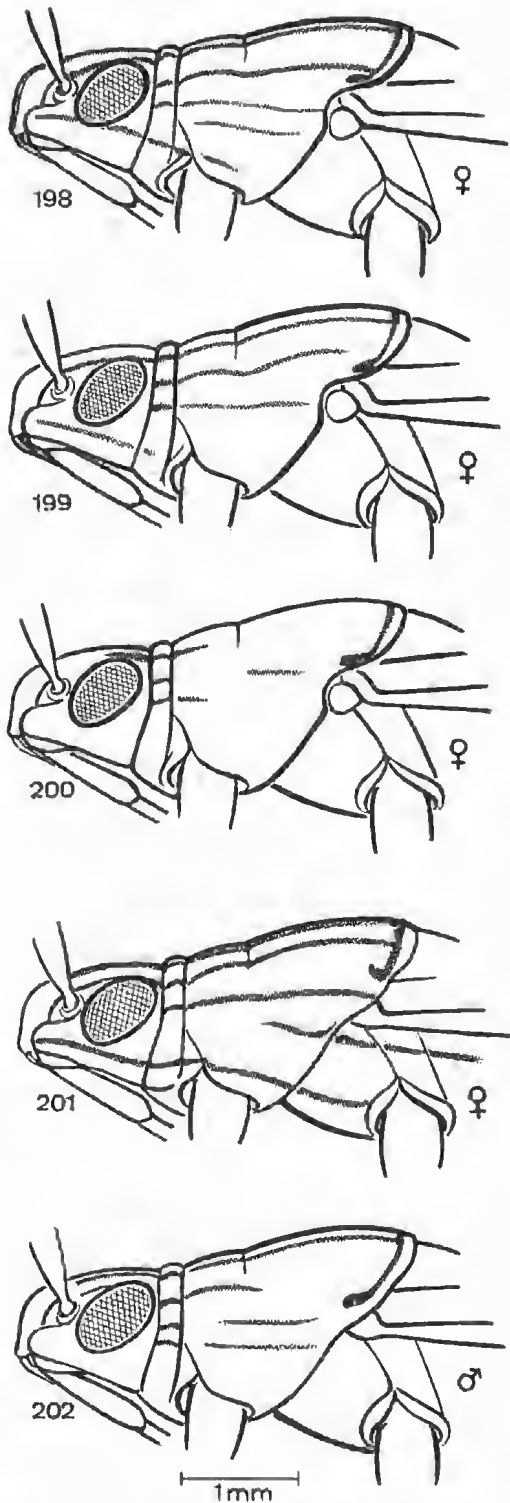
Negros Or. Sibulan, 30.ix.1959, L.W. Quate; Negros Or. Mt. Province Mayoyao, Ifugao, 1250-1500 m, 11.ix.1966, H. Torre Villas; Busuanga Is. 4 km N San Nicholas, 25-27.1962, H. Holtmann; Misamis Or. Mt. Empagatao, 25.iv.1961, H. Torre Villas; Luzon Camarineu, Sur, Mt. Isarog, Pili, 800-900 m, 4.v.1965, H.M. Torre Villas; Luzon, Mt. Prov. Ifugao, Mayoyao, 1000-1500 m, 8-9.ii.1966, H.M. Torre Villas; Palawan Mantalingajan, Pinigisan, 600 m, 9.ix.1961, Noona Dan exp. 61-62; id. Brookes Point Uring, 23.viii.1961; Bur. Agr. Col.B. Aroe; Mt. Banahao, Baker; Cuernos, Baker; Surigao, Mindanao, Baker; Mt. Makiling, Luzon, Baker; PALAU ISLANDS: Koror Is. NE, 26.iv.1957, C. W. Sabroski; MARIANA ISLANDS: Guam, ii.1958, N.L.H. Krauss; SOLOMON ISLANDS: Bougainville, Kukugai Village, 1500 m, xii.1960, N.W. Brandt; Guadalcanal, Gold Ridge, 21.iii.1955, E.S. Brown, Pres. com. Inst. ent. B.m. 1958-79. NEW HEBRIDES ISLANDS: Espiritu Santo Island, SW, Namatasopa, 300 m, 29.viii.1957, J. L. Gressitt; BABELTHAUP ISLAND: Iwang, Palau, 8 m, 19.xii.1952, J.L. Gressitt; NEW BRITAIN: Gisluve, Nakanai Mts. 1050 m, 26.vii.1956, E. J. Ford Jr.; PAPUA-NEW GUINEA: Bisianuma St. 40 km NW Port Moresby, 29.iv.1960, Port O'Brien; BISMARCK ARCHIPELAGO: Rossum, 6 km, SE of Lorengau, 180 m, 23.xii.1959; AUSTRALIA: North Queensland: Dunk Island, Aug. 1927, H. Hacker; Davis Creek, 26.iii.73, R. W. Broadleg; Iron Range, 1-9.vi.1971, S. R. Monteith; SINGAPORE: Col. Baker; H. N. Riley, 1904-2, id. 95-76; Gardens, xi.1922; Nee Sung Forest Reserve, 20 m, 7.xii.1958; VIETNAM: Haut Mekong, Nam Tiene, 14.iv.1918, R. V. Salvaza, 1918-1; Dalat, 6 km S, 1400-1500 m, 9.vii.1960, S. Quate, N.R. Spencer, R. Leech; LAOS: Sedone Prov. Paksong, 18.v.1965. The specimens mentioned are in the BMNH, BISHOP, USNM, QU and SAM.

The holotype of this species, described by Stål from Java, has been lost (*vide* Doctor Inge Persson, curator of Insects, Naturhistoriska Riksmuseet, Stockholm, in a letter dated December, 1975).

The two other specimens deposited at Stockholm were however handled by Stål and used for the description of the genus *Hyalopeplus*. These two females from the Philippines (Semper) and from Malacca (Kinberg) are typical *vitripennis*, the first specimen bearing the manuscript label '*Hyalopeplus vitripennis* Stål' (Stål's own handwriting). On these specimens the lines or vittae of the pronotum are fairly well marked, but those on the propleura and sides of abdomen and head are only vaguely indicated. The segment I of antenna is spotted with small reddish dots.

These specimens when compared with a series of twelve others taken in Bogor, Java, Indonesia, Tjilebut, 13.xi.1960, H. Hamann (BISHOP), have proved to belong to the same species. In these series the longitudinal stripes of head and pronotum, propleurs and abdomen show a fairly wide range of variation, as can be seen in the figures.

According to article 75 of the International code of Zoological Nomenclature (1964) I am designating a male specimen from Bogor, Java, Tjilebut, as a *neotype* of *Capsus vitripennis* Stål, 1855. Besides agreeing with the characters mentioned in the original description, they agree also with the specimens handled from the Philippines and Malacca. The locality, comparison with specimens handled by Stål and lodgement in the same Institution, in my view, renders it as a valid designation of the neotype.



Figs. 198-202—*Hyalopeplus vitripennis* (Stål): Colour variation of head and pronotum seen from side.

In the series from Bogor from which the neotype has been chosen the general coloration is ochraceous to pale yellow or citrine on head, pronotum and scutellum, the hemelytra and membrane vitreous and transparent (in this species there is a tendency for the hemelytra to become opaque or leathery). The head above shows three longitudinal lines or vittae (one median and two lateral along inner

margins of eyes); collar with seven distinct vittae or lines; one median and six lateral, plus one above the coxal cleft I and indication of another (sometimes obsolete) in front of coxal cleft, inferiorly; pronotum on fully coloured specimens also with seven longitudinal lines or vittae (greatly variable); five seen from above (one median and four lateral) and two slightly below lateral margin of propleura, which may have also two other lateral lines (one median and one inferiorly) following the lateral line of head and continuing to lateral portion of sternum and abdomen; scutellum with median line and two preapical spots (sometimes including the whole apex) reddish to dark brown or black. The intensity and colour of the lines varies considerably. Hind margin of pronotum with a transverse submarginal characteristic dark fascia not reaching hind border (as in *rama* Kirby), humeral angles black. Hemelytra and membrane vitreous, transparent, margins of clavus, corium, embolium, cuneus and nervures of membrane brown to black; legs pale yellow, hind femora with a few brownish or reddish dots on apical third; segment I of antenna in full coloured specimens with reddish dots.

Pronotum and longitudinal sulcus of scutellum transversally rugose, the latter and the cuneus about as long as wide at base, rostrum reaching the apex of hind coxae, hind tibiae with spines, short hairs and minute sclerotized tubercles.

Though he indicates a series of 20 specimens examined when describing *Hyalopeplus uncaria*, Roepke (1916) apparently had before him a mixed series of *vitripennis* Stål and *rama* Kirby. Following his description and illustration, and based also on his label data: "Asaham, Sumatra, 1912, W. Roepke" I have chosen a female specimen as *lectotype* (hemelytra leathery and transverse dark fascia of posterior portion of disc of pronotum not reaching the hind border). This specimen has the scutellum about as long as wide at base, cuneus only twice as long as wide and legs with the apex of hind femora and hind tibiae pale, not noticeably pilose. This species is identical with *vitripennis* Stål and must be treated as its synonym.

Other specimens examined in the series from Asaham, are as follows: 1 female, Asaham, Sumatra, 1912, W. Roepke; 1 female, Asaham (S.O.K. (alimatan), on *Melafloe*, iv. '17, leg. Corporal, *Hyalopeplus uncaria* Rpke, det. Leefmans; 2 males and 6 females, Sumatra, W. Roepke, belong to *Hyalopeplus rama* (Kirby, 1891). In all of them, the scutellum is noticeably longer than wide at base, the second antennal segment of males are longer (about 4.0-4.6 mm long), the cuneus is reddish and distinctly longer than wide at base, the apex of hind femora and the hind tibiae are reddish

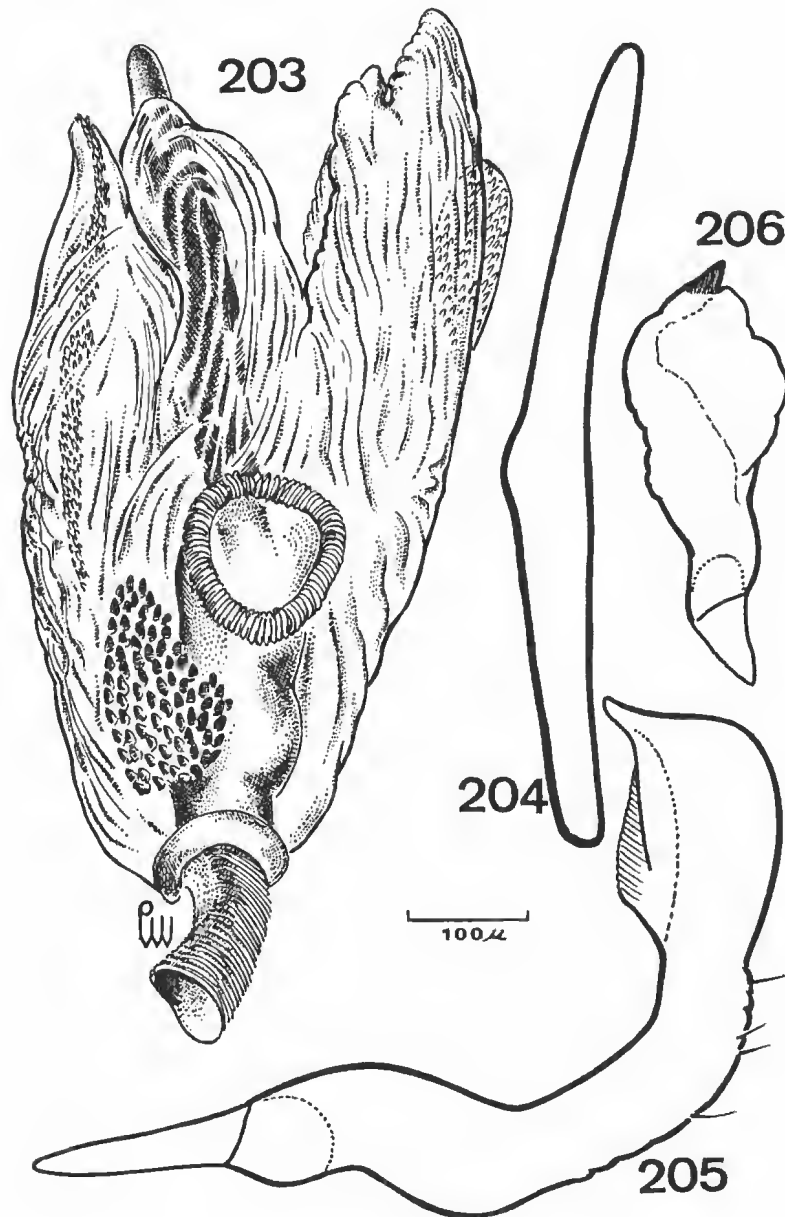
hairs of tibia long. The transverse posterior dark fascia of disc reaching the hind border will separate it at once from *vitripennis*. The mention of "absence of colored fasciae on head and pronotum" is due to the fact that the specimens were kept in alcohol. Also the mention of a leathery hemelytra is a character that occurs occasionally in specimens of *vitripennis*.

Hyalopeplus amboinae Carvalho, 1956 is also a synonym of *vitripennis* Stål. At the time of its description the author was not aware of the colour variation of *vitripennis* and the differences indicated

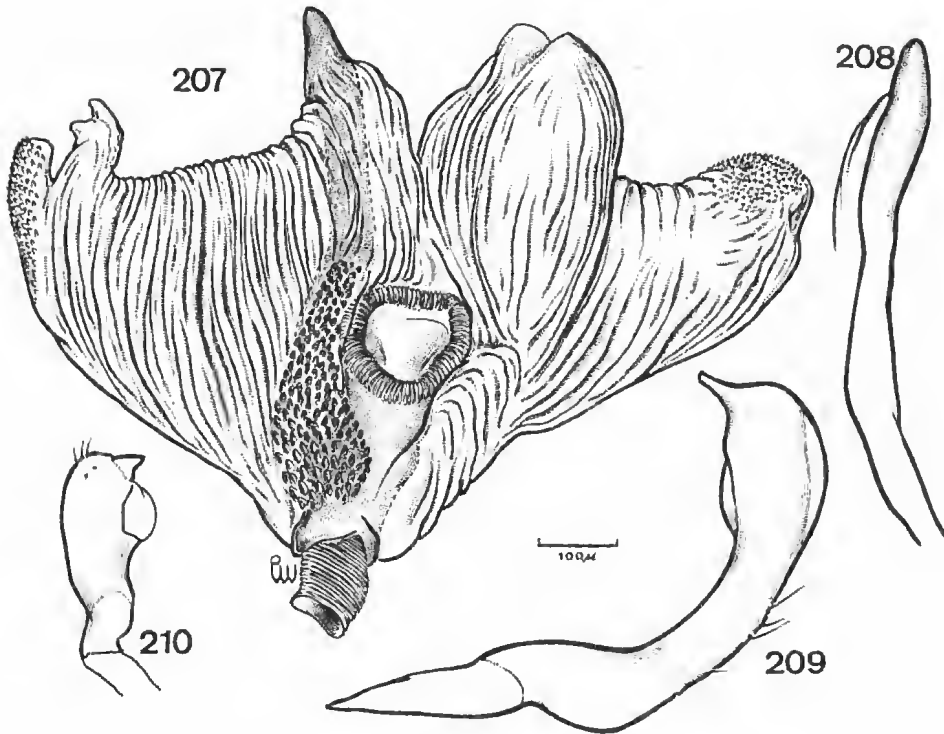
in the structure of male genitalia were found to be also within the range of variation of the species.

Finally *capsus lineifer* Walker, 1873 was correctly synonymized with *vitripennis* by Distant, 1904. It represents the extremely intensely coloured specimens, usually females. In the series studied from Bogor I have found all colour variations which are here represented in figures.

This species approaches *Hyalopeplus malayensis* n.sp. but is readily differentiated by the colour of cuneus and size.



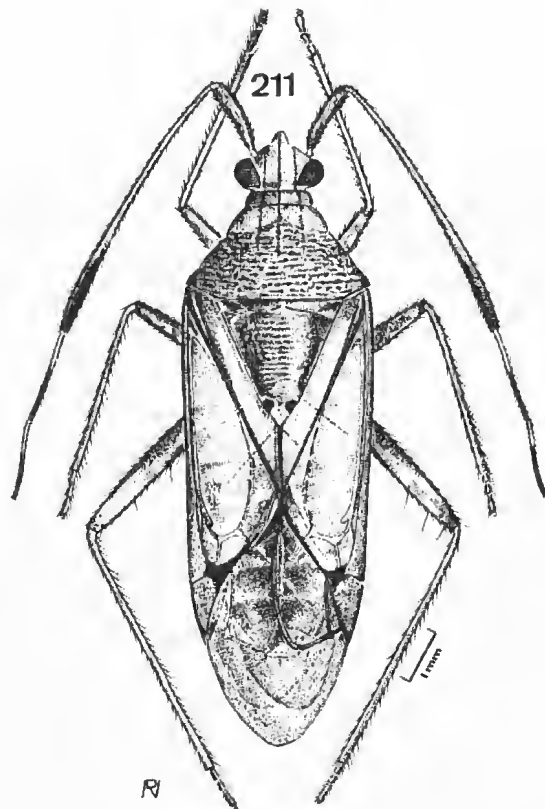
Figs. 203-206—*Hyalopeplus amboinae* Carvalho: Fig. 203—Penis; Fig. 204—Spiculum of vesica; Fig. 205—Left paramere; Fig. 206—Right paramere.



Figs. 207-210—*Hyalopeplus vitripennis* (Stål): Fig. 207—Penis; Fig. 208—Spiculum of vesica; Fig. 209—Left paramere; Fig. 210—Right paramere.

Key to the species of the subgenus *Adhyalopeplus* nov.

1. Pronotum distinctly setose; hind femur apically and hind tibiae basally pale to brownish *pellicidus* (Stål)
 Pronotum glabrous or very sparsely and shortly setose; hind tibia otherwise coloured 2
2. Collar without longitudinal vittae or bars, infusate to castaneous anteriorly; pronotum with a single longitudinal wide vitta *samoanus* Knight
 Collar with longitudinal vittae or bars 3
3. Inner base of cuneus and extreme apex of corium with a common black spot; scutellum very large and prominent, lutescent; cuneus opaque, sulphurescent to reddish *cuneatus* n.sp.
 Inner base of cuneus and extreme apex of corium without a common black spot; scutellum of normal size 4
4. Disc of pronotum with a single longitudinal line or vitta, sometimes present only anteriorly or posteriorly; collar with a whitish pruinose vitta or bar laterally *similis* Poppius
 Disc of pronotum with five longitudinal lines or vittae, sometimes the two median obsolete; collar without a whitish pruinose bar laterally 5
5. Longitudinal vittae or lines on disc wide; pronotum and scutellum coarsely punctate; cuneus totally reddish *madagascariensis* n.sp.
 Longitudinal vittae or lines on disc narrowed towards head; pronotum and scutellum moderately punctate; cuneus reddish on base and outer margin *loriae* Poppius



***Hyalopeplus* (*Adhyalopeplus*) *cuneatus*, n.sp.**

(Figs. 211-215)

Characterised by the large and prominent scutellum and by the colour of base of cuneus and apex of corium.

Fig. 211—*Hyalopeplus cuneatus* n.sp., male holotype.

Male: Length 8.9 mm, width 2.7 mm. *Head*: Length 1.0 mm, width 1.5 mm, vertex 0.68 mm. *Antenna*: Segment I, length 1.0 mm; II, 4.5 mm; III, 1.5 mm; IV, 1.3 mm. *Pronotum*: Length 1.4 mm, width at base 2.6 mm. *Cuneus*: Length 1.0 mm, width at base 0.72 mm (holotype).

General coloration ochraceous with castaneous and reddish areas; head with a longitudinal median vitta reaching clypeus, eyes, apical portion of segment I of antenna (main body of segment is pale yellow), segment II (except black apex) brown, segments III-IV (except pale base) black. The head in some specimens show also two lateral vittae along inner margins of eyes and a longitudinal vitta on gena reddish. Pronotum with collar showing seven longitudinal narrow vittae (in some specimens the three median ones reach the area of calli) brown, humeral angles black; scutellum lutescent with two subapical black spots (one at each side); hemelytra glassy, transparent, extreme base of clavus, commissure and apical area of corium, coalescent with base of cuneus, fuscous to castaneous; embolium and cuneus opaque, the latter sulphurescent, pale yellow or reddish in some specimens; membrane hyaline. Underside of body pale yellow, hind femora reddish towards apex, segments III of tarsi black.

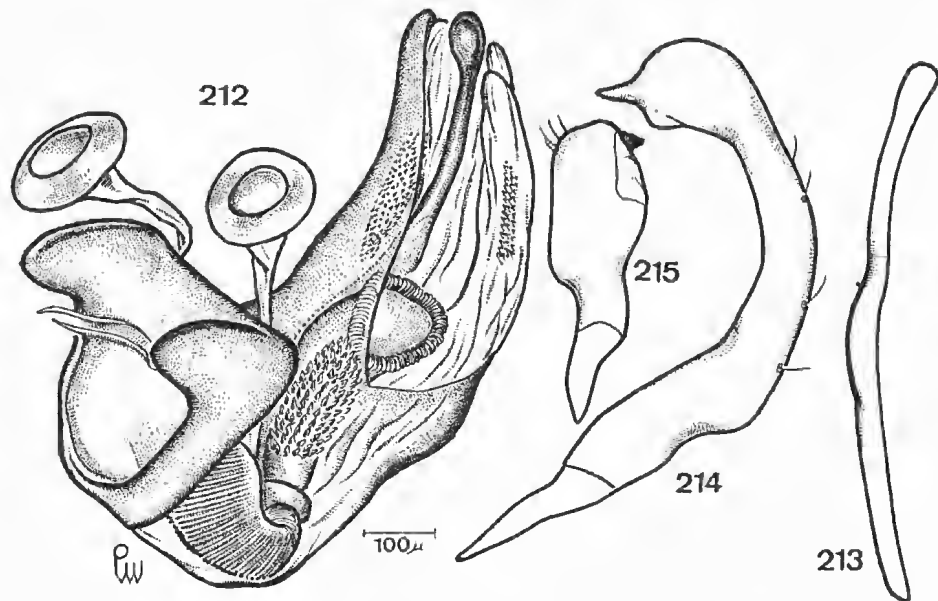
Pronotum distinctly punctate-rugose, scutellum very prominent, punctate-rugose, the punctures more visible, humeral angles acute, frons striate.

Genitalia: Penis (fig. 212) with membranous lobes provided with groups of sclerotized spines, a median spiculum (fig. 213) and a group of spines near secondary gonopore. Left paramere (fig. 214) curved, enlarged apically, ending in an acute point. Right paramere (fig. 215) smaller, also ending in a point.

Female: Similar to male in colour and general aspect. Length 10.4 mm, width 3.1 mm, vertex 0.80 mm.

Holotype; male, INDONESIA: Waris, S of Hollandia, Irian Jaya, 450-500 m, 8-15.viii.1959 (BISHOP). *Allotype*: female, NEW GUINEA: NE Wau, 1200 m, 11.xii.1965, J. Sedlacek. *Paratypes*: three males and three females, same data as holotype and Gazelle Pen., Gaulin, 140 m, 21-27.x.1962, J. Sedlacek, malaise trap; Wareo, Finsch Haven, Rev. L. Wagner, in the collection above and of the author.

Differs from others in the subgenus by the peculiar spot common to base of cuneus and apex of corium, as well as by the large and prominent scutellum.



Figs. 212-215—*Hyalopeplus cuneatus* n. sp.: Fig. 212—Penis; Fig. 213—Spiculum of vesica; Fig. 214—Left paramere; Fig. 215—Right paramere.

***Hyalopeplus (Adhyalopeplus) loriae* Poppius, 1912**

Hyalopeplus loriae Poppius, 1912a, p. 415; Carvalho, 1959, p. 320.

(Figs. 216-220)

Characterised by the colour of pronotum and cuneus.

Male: length 7.8 mm, width 2.2 mm. **Head:** Length 0.7 mm, width 1.4 mm, vertex 0.56 mm. **Antenna:** Segment I, length 0.6 mm; II, 3.6 mm; III-IV, broken. **Pronotum:** Length 1.3 mm, width at base 2.1 mm. **Cuneus:** Length 0.84 mm, width at base 0.50 mm.

General coloration ochraceous with brown and reddish areas; head with three longitudinal lines (one median and two lateral along inner margin of eyes); collar with seven longitudinal bars or vittae, disc with a median and two longitudinal lateral vittae becoming wider towards the hind portion and humeral angles brown to black, hind margin of disc with a transverse narrow dark fascia; base, lateral margins and apex of scutellum dark brown; hemelytra glassy, transparent, margins of clavus narrowly, apical portion of corium, cuneus internal and externally, nervure of membrane dark brown to reddish. Underside of body pale yellow, legs pale, apex of front tibiae, apex of hind femora and hind tibiae reddish; basal half of hind femora pale. Antenna brownish yellow, segments II and III towards apices and segment IV almost totally black, segment I reddish yellow with reddish dots.

Rostrum reaching the middle coxae, disc of pronotum punctate-rugose.

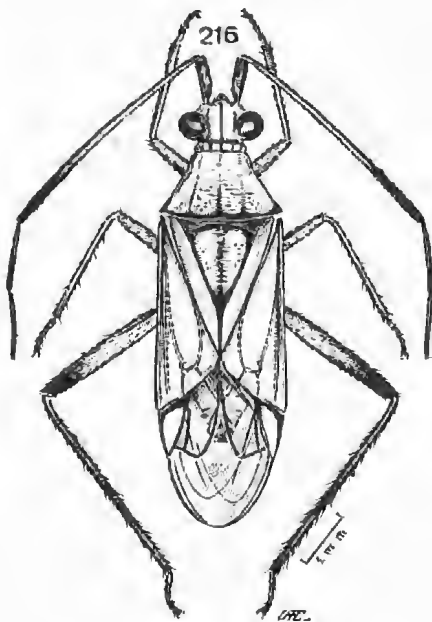


Fig. 216—*Hyalopeplus loriae* Poppius, male.

Genitalia: Vesica of aedeagus (fig. 217) with membranous lobes with groups of sclerotized spines apically and a median spiculum (fig. 218). Left paramere (fig. 219) curved, pointed apically. Right paramere (fig. 220) globose, also with a sclerotized point.

Female: Similar to male in colour and general aspect, slightly more robust.

Specimens studied: males and females, NEW GUINEA: Wau, Morobe District, 1 200 m, 1-4.viii.1962 (BISHOP). AUSTRALIA: N.S. Wales, 19 mi W of Woodenbong, nr. Kilarney, 8.xii.1948; Queensland, Townsville, 14.v.'03, F. P. Dodd, (BMNH). There are a number of specimens of this species in Australian collections from Queensland, the Northern Territory and the north of Western Australia. In coastal Queensland it extends as far south as Brisbane but elsewhere in Australia it is restricted to the far northern areas.

The holotype of this species is mentioned as being deposited in the Museum of Natural History "Giacomo Doria", Genova. It is close to *Hyalopeplus* (N.) *madagascariensis* n.sp. but differs by the colour of pronotum and cuneus.

***Hyalopeplus (Adhyalopeplus) madagascariensis*, n.sp.**

(Figs. 221-225)

Characterised by the wide longitudinal vittae of pronotum and colour of cuneus.

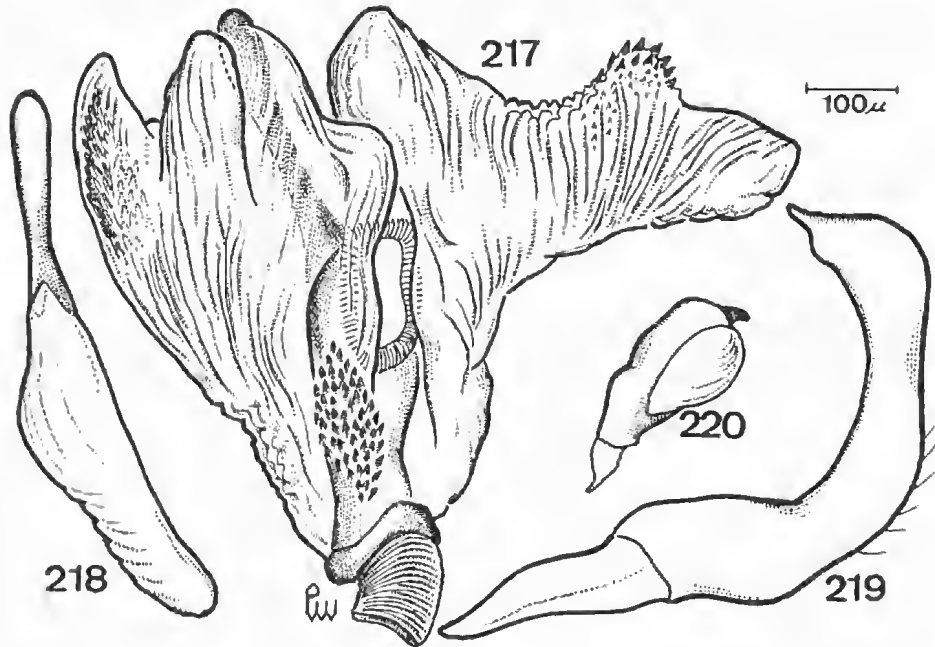
Male: Length 8.0 mm, width 2.1 mm. **Head:** Length 0.8 mm, width 1.2 mm, vertex 0.48 mm. **Antenna:** Segment I, length 0.7 mm; II, 4.0 mm; III-IV, broken. **Pronotum:** Length 1.4 mm, width at base 2.1 mm. **Cuneus:** Length 0.92 mm, width at base 0.48 mm (holotype).

General coloration flavescent to citrine with dark brown and reddish areas; head, pronotum and scutellum citrine; a longitudinal vitta on middle of head, including clypeus (which has also two lateral spots basally), two lateral ones bordering inner margins of eyes castaneous to fuscous; five longitudinal vittae on pronotum: one median, two lateral (the three wide and continuous from collar to hind margin of disc) and two submedian (much more slender, almost obsolete, reddish-orange), a transverse marginal fascia posteriorly on disc and humeral angles dark brown to black; scutellum with median line, basal angles and apex dark brown, hemelytra glassy, transparent, sutures and external margins of embolium and cuneus black, the latter reddish with a pale fascia along inner margin. membrane glassy, slightly fuscous, nervures dark. Antenna castaneous to reddish, segment I dark

brown, segment II fuscous at apex, segment III black, pale basally, segment IV black; eyes castaneous. Underside of body flavescens, a vitta along side of head, a spot on collar behind eye and a vitta on upper margin of propleura, as well as an identical one on lateral area of abdomen reddish to fuscous or black; legs pale yellow, hind femora reddish apically with brown spots, hind tibiae reddish, apices of tarsi fuscous.

Pronotum distinctly punctate-rugose on black fasciae, scutellum punctate, cuneus fairly short, tibiae moderately pubescent.

Genitalia: Penis (fig. 222) with membranous lobes, a median spiculum (fig. 223) and a group of spines near secondary gonopore. Left paramere (fig. 224) curved, enlarged apically, apex pointed. Right paramere (fig. 225) small, globose, pointed.



Figs. 217-220—*Hyalopeplus lorae* Poppius: Fig. 217—Vesica of aedeagus; Fig. 218—Spiculum of vesica; Fig. 219—Left paramere; Fig. 220—Right paramere.

Female: Unknown.

Holotype: male, MADAGASCAR: Morafenoche, Fôret Majesy, 5.52, R. Paulian, in the Collection of the author. **Paratype:** male, same data as holotype.

This species differs from *lorae* Poppius by the colour of pronotum and cuneus.

Hyalopeplus (Adhyalopeplus) pellucidus (Stål, 1859)
Stål, 1870

Capsus pellucidus Stål, 1859, p. 255; Walker, 1873, p. 127.

Hyalopeplus pellucidus Stål, 1870, p. 671; Atkinson, 1890, p. 106; Kirkaldy, 1902c, p. 143; Reuter, 1905b, p. 2; Kirkaldy, 1907, p. 159; Poppius, 1912a, p. 417; Cheesman, 1927, p. 157; Zimmerman, 1948, p. 218, fig. 97; Carvalho, 1959, p. 320.

(Figs. 226-230)

Characterised by the pubescence of pronotum and scutellum.

Male: Length 7.6 mm, width 2.3 mm. **Head:** Length 0.8 mm, width 1.4 mm, vertex 0.48 mm. **Antenna:** Segment I, length 0.9 mm; II, 3.8 mm; III-IV, broken. **Pronotum:** Length 1.3 mm, width at base 2.0 mm. **Cuneus:** Length 0.92 mm, width at base 0.28 mm (holotype).

General coloration flavescens testaceous with castaneous and reddish areas; head, pronotum and scutellum flavescens testaceous; three longitudinal lines on head (on central and two lateral along inner margin of eyes), three longitudinal ones on pronotum (the lateral pair reaching only over calli, sometimes indicated or absent), the median one reaching the hind border of disc (obsolete or absent in some specimens), a transverse submarginal posterior fascia and humeral angles fuscous to castaneous or black; mesoscutum at middle, scutellum basally and two subapical spots fuscous to black; eyes castaneous, antennae fuscous to brown, segment I paler with small reddish dots, segments III and IV black with extreme base pale; hemelytra glassy, transparent, sutures of clavus and corium, outer margin of embolium and cuneus fuscous to

castaneous (cuneus frequently reddish), in some specimens darker externally; membrane glassy, nervures fuscous. Underside of body ochraceous to lutescent, a longitudinal fascia on side of head (sometimes obsolete or absent) and anteriorly on propleura castaneous; legs pale yellow to testaceous, femora with numerous fuscous dots, tibiae flavescent to testaceous.

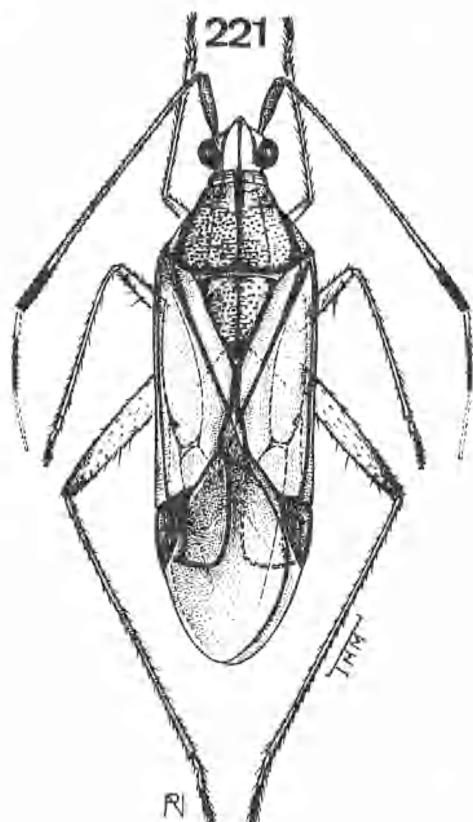


Fig. 221—*Hyalopeplus madagascariensis* n.sp., male, holotype.

Pronotum and scutellum noticeably setose, cuneus and hind tibiae densely pubescent.

Genitalia: Penis (fig. 227) with membranous lobes with sclerotized teeth apically, a median spiculum (fig. 228) and a group of spines near secondary gonopore. Left paramere (fig. 229) curved, pointed apically. Right paramere (fig. 230) small, also pointed apically.

Female: Similar to male in colour and general aspect, slightly more robust.

Host plants: *Acacia koa*, *Coprosma*, *Dodonaea*, *Hibiscus*, *Guava*, *Metrosideros*, *Pipturus*, *Sida*, *Strausia*.

Specimens studied: male, holotype, Oahu, *Capsus pellucidus* Stål (STOCKHOLM); HAWAIIAN ISLANDS: Haleakala, Maui, NW Slope, 4.iii.1947, 3 500 ft; Ollaa, 2 500 ft, Washmead; Hilo, 16.iv; Oahu, vi.1958, light trap, J. Rodgers; Puu Palikea, iv.1960, E. J. Ford Jr.; Posmohotrail Koolau Mt.;

Maiawa, 15.i.1942 on *Bougainvillea*; Kilauea, Washmead; Manoa, on pear Buds, 1936; Macdonald Hotel; Pearl City, Oahu, 22.ii.1923, E. H. Bryan; Castle Trail, Oahu, 27.ix.1958, E. H. Bryan; Waimea, Hawaii, 18.vi.1922, Old Parker Place, Illingworth; Upper Hamakua, Ditch Trail, 10.i.1929, O. H. Swezey; Honolulu, Oahu, xii.1925. S. C. Ball; Manoa, Oahu, 2.v.1925, S. C. Ball; Kam School, 5.viii.1922, Bryan Ex. *Hibiscus*; Koko Head, F. F. Illingworth; Hana, Maui, 7.v.1920, E. H. Bryan; Kiaulea, Hawaii, 10.ix.1929, Kipuka Puaplu, O. H. Swezey; Waimea, Hawaii, 15.vi.1922, Old Parker Place, Illingworth; Kainalu, Molokai, O. H. Swezey; Hawaii, Ollaa, 29 mi. in house, viii.1938, A. Stiehiro; Haelaau, Maui, 19.xii.1928, O. H. Swezey; Molokai, Waikalu, 29.iv.1955, Joyce; Kamiloloa, Molokai, 19.xii.1925, O. H. Swezey; Wailae Beach, Oahu, Illingworth; Mr. Kaala, 6.vii. Oahu, O. H. Swezey; Maui, 9.iii (BISHOP).

According to Kirkaldy this species is predacious. All indications however are that it is phytophagous, as are most other species in the genus. Zimmerman (1948) states that it is introduced in Hawaii. Miss Cheesman (1927) records the species from Hiva-oo in the Marquesas Islands.

It differs from others in the subgenus by the distinctly setose pronotum and scutellum and by the unicolorous hind tibia which is flavescent to testaceous but without traces of reddish. Its closest ally is *Hyalopeplus samoanus* Knight which has the collar without bars or lines, the disc of pronotum differently coloured and hind legs with the apex of femur and base of tibia reddish.

Hyalopeplus (*Adhyalopeplus*) *samoanus* Knight, 1935

Hyalopeplus samoanus Knight, 1935, p. 213, fig. 5; Carvalho, 1959, p. 320.

(Figs. 231-235)

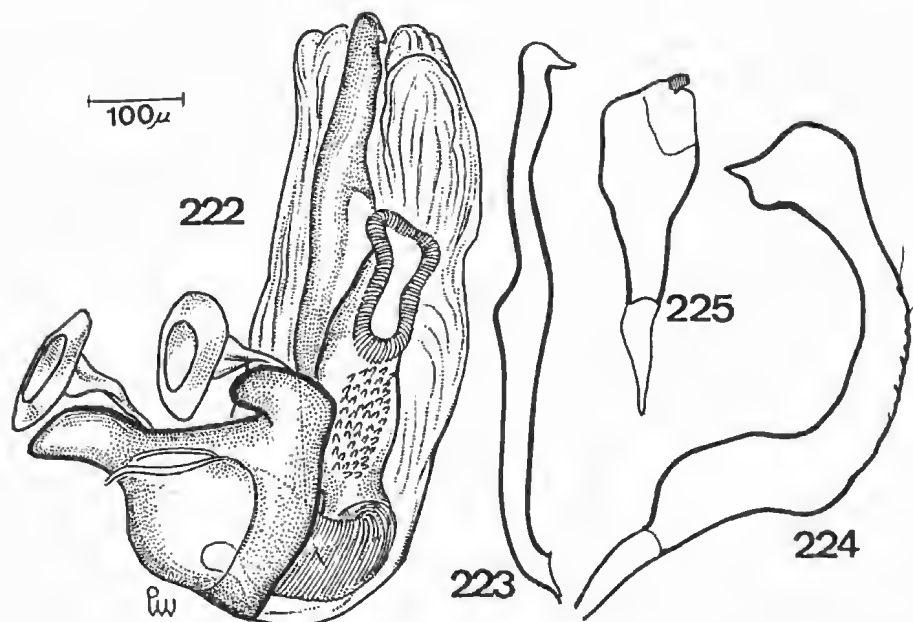
Characterised by the colour of pronotum and hind legs.

Male: Length 8.7 mm, width 2.4 mm. **Head:** Length 0.8 mm, width 1.5 mm, vertex 0.61 mm. **Antenna:** Segment I, length 1.3 mm; II, 5.2 mm; III, 1.9 mm; IV, 1.3 mm. **Pronotum:** Length 1.6 mm, width at base 2.2 mm. **Cuneus:** Length 0.8 mm, width at base 0.44 mm.

General coloration flavescent to testaceous or citrine with castaneous and reddish areas; head, pronotum and scutellum ochraceous to citrine, vertex in some specimens with indication of three longitudinal fuscous lines (obsolete in others); collar castaneous anteriorly or totally castaneous; pronotum with a transverse submarginal castaneous to

black fascia which reaches the humeral angles, a longitudinal wide castaneous to black vitta on disc (in some specimens reaching calli, in others present only posteriorly), some darker specimens with hind margins of calli also dark, leaving only central area of disc flavescent testaceous; mesoscutum dark at middle or totally; scutellum with basal angles and two subapical spots castaneous to black (in extreme coloured specimens the base and apex of scutellum black); eyes castaneous, antenna yellow testaceous, segment I paler with minute reddish dots, segments

III and IV black, pale basally; hemelytra glassy, transparent, claval, corial and embolial sutures castaneous to black, cuneus reddish with outer margin pale, membrane transparent, nervures fuscous. Underside of body ochraceous, side of head and propleura with indication of a longitudinal vitta (in fully coloured specimens), legs pale testaceous, femora with fuscous spots, apex of hind femora, apices of tibiae and base of hind tibiae reddish. Pronotum punctate-rugose, cuneus noticeably long, hind tibiae densely pubescent.



Figs. 222-225—*Hyalopeplus madagascariensis* n.sp.: Fig. 222—Penis; Fig. 223—Spiculum of vesica; Fig. 224—Left paramere; Fig. 225—Right paramere.

Genitalia: Penis (fig. 232) with vesica of aedeagus showing membranous lobes provided with sclerotized teeth apically, a median spiculum (fig. 233) and a group of spines near the secondary gonopore. Left paramere (fig. 234) curved, enlarged apically, with an apical point. Right paramere (fig. 235) small, also pointed apically.

Female: Similar to male in colour and general aspect, but more robust.

Geographical distribution: Samoan Islands.

Specimens studied: two paratypes, SAMOA: Upolu, Vailima and Apia Is. *Hyalopeplus samonau* Knight (BISHOP); Upolu, Savago, 0-100 m, 14.x.1969, N. L. H. Krauss; Manua, Tau E of Tau Village (Luma), 50-200 m, 16.iii.1965, sweeping, Samuelson; Tutuila Is. 2.ii.1957, W. R. Kellen; Pago-Pago, 9.ix.1923, Swezey & Wilder; Afinalu, Upolu, 6.ii.1940, 2 200 ft, at light, Swezey & Zimmerman; Vailima, Upolu Is. Buxton & Hopkins; Afiamalu, Upolu, iii.1962, R. W. Taylor, light trap.

The species differs from allied forms by the colour of the collar (longitudinal bars or vittae absent), by the single longitudinal vitta on disc of pronotum and by the noticeably long cuneus.

***Hyalopeplus (Adhyalopeplus) similis* Poppius, 1912**

Hyalopeplus similis Poppius, 1912b, p. 8; Poppius, 1912a, p. 41; Carvalho, 1959, p. 320.

Hyalopeplus horvathi Poppius, 1912a, Poppius, 1912b, p. 9, Carvalho, 1959, p. 320. (*n.syn.*)

Hyalopeplus bakeri Poppius, 1915, p. 3; Carvalho, 1959, p. 320 (*n.syn.*)

Hyalopeplus krishna Ballard, 1927, p. 64, pl. 17, fig. 7; Carvalho, 1959, p. 320 (*n. syn.*)

(Figs. 236-247)

Characterised by the colour of collar and pronotum and by the structure of the male genitalia.

Male: Length 7.0-8.4 mm, width 2.0-2.4 mm. **Head:** Length 0.6-0.8 mm, width 1.2-1.3 mm, vertex

0.48-0.58 mm. *Antenna*: Segment I, length 0.8-0.9 mm; II, 4.0-4.4 mm; III-IV, broken. *Pronotum*: Length 1.4-2.0 mm, width at base 2.4-2.8 mm. *Cuneus*: Length 0.80-1.0 mm, width at base 0.40-0.44 mm.

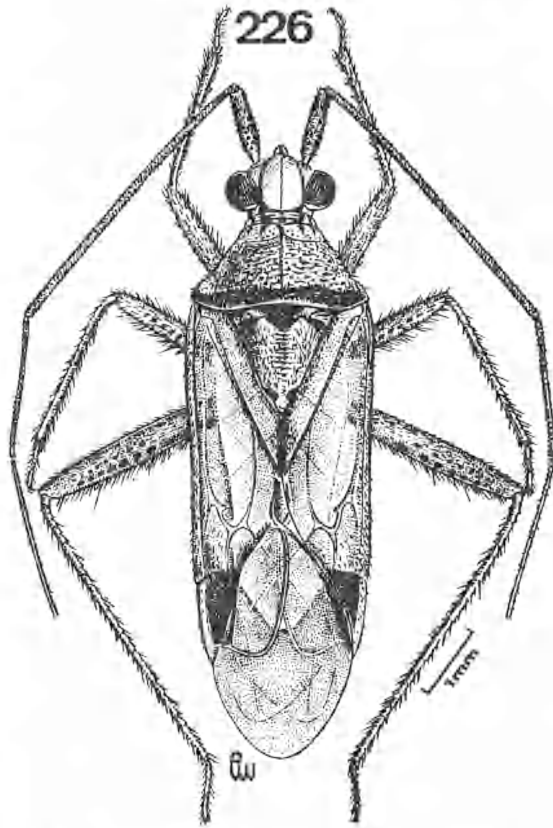


Fig. 226—*Hyalopeplus pellucidus* (Stal), male, compared with type.

General coloration pale yellow to citrine with castaneous and reddish areas; pronotum and scutellum pale yellow to citrine or lutescent; a longitudinal line on vertex and two others bordering inner margins of eyes, a median longitudinal line to pronotum and scutellum (obsolete or absent in some specimens) castaneous; collar castaneous to pale yellow with two characteristic whitish pruinose bars (one at each side) in well preserved specimens, the central portion with three bars, usually forming a somewhat triangular area darker in colour, its apex lying between front area of calli. The whitish pruinose bars and the dark triangular area are visible on fully coloured specimens. Pronotum with a transverse fascia posteriorly reaching the hind border of disc and humeral angles castaneous to black; mesoscutum at middle and scutellum basally and apically (sometimes the subapical spot is divided into two small ones not reaching apex) castaneous; antenna brown, apex of segment II and segments III-IV fuscous, basal portions of segments pale; hemelytra glassy, transparent, claval, corial and

embolial sutures fuscous to black, cuneus reddish (pale at external margin), membrane glassy, slightly fuscous, nervures castaneous. Underside of body ochraceous, a reddish castaneous vitta on lateral portion of head and another on upper margin of propleura reddish to castaneous, abdomen with a reddish lateral vitta (obsolete in some specimens); legs pale yellow, tibiae I and II reddish apically, hind femora and hind tibiae totally reddish.

Pronotum noticeably punctate-rugose, scutellum prominent, sulcate at middle, cuneus fairly long, hind tibiae with long pubescence.

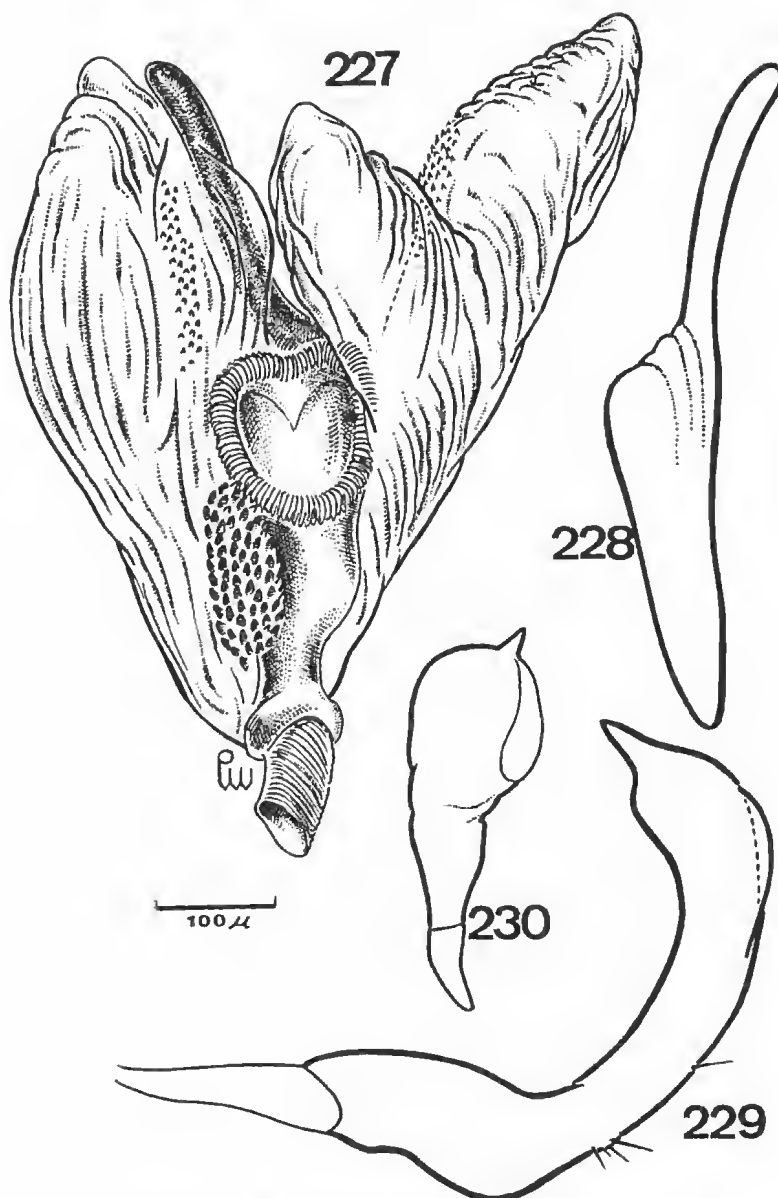
Genitalia: Penis (fig. 237, 243) with membranous lobes provided with sclerotized apical teeth, a median spiculum (fig. 238, 244) and a group of spines near secondary gonopore. Left paramere (fig. 239, 245) curved, enlarged and pointed apically. Right paramere (fig. 240, 246) small, enlarged apically, with a terminal point.

Female: Similar to male in colour and general aspect, more robust.

Geographical distribution: AFRICA: Ivory Coast, Saint Thome Island. ASIA: India, Malay Peninsula. OCEANIA: Philippine Islands, Solomon Islands, New Britain, Borneo, Papua New Guinea, West Irian, Australia, Timor.

Specimens studied: male, lectotype (new designation), *Hyalopeplus horvathi* Poppius, Ins. St. Thome, Mocquerys (HELSINKI); female, lectotype (new designation), *Hyalopeplus similis* Poppius, Langenburg, iv.1898, Fulleborn (HELSINKI). *Hyalopeplus bakeri* Poppius, Los Banos, Philippines, Baker (HELSINKI); lectotype, *Hyalopeplus krishna* Ballard, Chapra, Mackenzie, Pres. by E. Ballard (BMNH); female, paralectotype, same data as lectotype.

Several males and females; PHILIPPINE ISLANDS: Luzon, Mt. Prov. Ifugao, Mayoyao, 1 000-1 500 m, 8.vii.1966, M. Torrevillas; Mindanao, Agusan, Los Arcos, 19-23.xi.1959, C. M. Yashimoto; Negros Is., Camp Lookout, Dumaguete, 6.iv.1961, T. Schneiria, A. Reyes; Leyte, Aboyo, 35 mi S Tacloban, 7-14.vii.1961; Balabao Dalawam Bay, 5.x.1961, Noona Dan Exp. 61-62; Acupan Benquet, Luzon 15.vii., C. S. Banks; Busuanga Is., 4 km N San Nicolas, 21.v.1962, M. Thompson; Mindanao, Lanao, Grain Mts. 1380 m, 16.vi.1958, Ifugao Prov.; Liwo, 8 km E Mayoyao, 1 000-1 300 m; Busuanga, 4 km N San Nicolas 26.v.1962, H. Holtman; Mt. Province Mayoyao, Ifugao, 1 200-1 500 m, 10.viii.1966, H. M. Torrevillas; Mindanao, Lanao Butig Mts. 24 km, Ne Butig, 1080 m, H. F. Milliron; SOLOMON ISLANDS: Guadalcanal, i.1921, J. A. Kuschel; New Georgia Gr. Gize Is. 30 Km, 11-18.vii.1964, J. M. Sedlacek;



Figs. 227-230—*Hyalopeplus pellucidus* (Stal): Fig. 227—Vesica of aedeagus; Fig. 228—Spiculum of vesica; Fig. 229—Left paramere; Fig. 230—Right paramere.

San Cristoval, Bwelnaniawarikiapu, 12.vii.1960, C. W. O'Brien; Santa Isabel, Tatamb, 24.vi.1960, C. W. O'Brien; Malaita, Auki, 20 m, 3-5.vi.1964, N. V.; Kolombangara, Gollifer's Camp, 700 m, 23.i.1964, P. Shanagan; Guadalcanal, Lame nr. Mt. Tatuve, 300 m, 17.v.1960, C. W. O'Brien. NEW BRITAIN: Gazelle Pen., Gaulim, 140 m, 21-27.x.1962, J. Sedlacek. BORNEO: Sarawak, Gunong Matang, 120 m, 16.xi.1958, M.V., J. L. Gressitt & Maa. PAPUA NEW GUINEA: Eliptamin Valley, W. W. Brandt; NE Tsenga, 1 200 m, Upper Jimmi V., 15.viii.1955, J. L. Gressitt; Torricelli Mts., Mokai Vill. 750 m, 16-31.xii.1958, W. W. Brandt; Wau, 1 200 m, 16.viii.1964, J. Sedlacek. INDONESIA: Waris, S of Hollandia, Irian Jaya, 4 500-5 000 m, 8-15.viii.1959, T. C. Maa; Waigeu, Camp Nok. 2 500 ft. iv.1938, L. E.

Cheesman, B.M. 1938-593; Kupang, Timor, 6-21.vi.1929, I. M. McKerras; MALAYSIA: Perak, Larut Hills, at light, 4 500 ft, ii.1915, H. M. Pendlebury; Bettotan, NT, Sandakan, 24.viii.1927; CENTRAL INDIA: Mandhya Pradesh, Satpura Hills, ix.1970, Pachmari 3 500 ft. AUSTRALIA: North Queensland, Redlynch, 10.xii.1938, Papuan-Australian Exp. B.M. 1947-448; id. 14.xii.1938; id. 21-30. vii.1938; Redlynch, Queensland, xii. 1938, B.M. 1949-61; Peach River, Shepards Battery Site, Cape York Pen., 800 ft, 13.viii.1948, Archbold Exp. North Queensland; 3♂ 2♀ Iron Range, Cape York Peninsula, 27.iv.-4.v.1973, G.B. Monteith; 1♀, same locality and collector but 5-10.v.1968; 1♀, same locality and collector but 11-17.v.1968; 1♀, Lockerbie Scrub, Cape York, 19-22.iv.1973, G.B. Monteith; 1♀, Mt. Carbine, S.i.1964, G. Monteith;

2♀, Upper Mulgrave River, 30.iv.1970, G. B. Monteith; 2♀♀, same locality and collector but 1-3.xii.1965; 1♀ Bowen, 8.ii.1975, B. K. Cantrell; 2♀, 5 km (3 mi.) W of Mossman, 13.iii.1964, I. F. B. Common & M. S. Upton; 1♂ 1♀, Iron range, 10.iv.1964, I. F. B. Common & M. S. Upton.

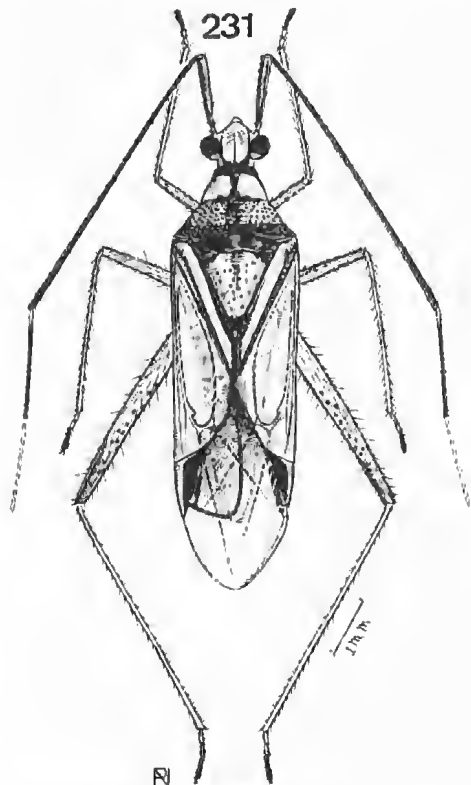


Fig. 231—*Hyalopeplus samoanus* Knight; male, compared with type.

Specimens recorded are in AMNH, BMNH, BISHOP, USNM, ANIC, QU and Department of Primary Industries Brisbane.

Differs from other species in the genus by the colour of collar and pronotum, by the noticeably long cuneus and by the hind tibiae densely pubescent.

Hyalopeplus similis Poppius was described based on two females from Lake Nyassa. In the present study we have examined specimens from Lamto, Toumodi, Ivory Coast; Bambari (on cotton) and Tafo. *Hyalopeplus horvathi* is mentioned by Poppius as deposited in the Museum of Natural History, Budapest. At least one of the two males was retained in Helsinki and is being designated as lectotype.

In the present work *horvathi* and *bakeri* are considered as synonyms of *similis*. Besides having a very close similarity in coloration and general aspect, especially bars of head and collar, the male genitalia are similar. Since the species is widely

spread over the Oriental Region and Oceania is quite probable that it has been introduced in the Ethiopian Region.

Hyaloplectus, n. gen.

Type-species: Hyaloplectus solomonicus n. sp.

Body elongate, glabrous above. Head with a short neck, vertex immarginate, frons prominent, striate, clypeus flat, visible from above, eyes prominent, slightly removed from collar, jugum and lorum flat, buccula small, rounded, rostrum reaching hind coxae; antennae cylindrical, shortly pubescent, segment I slightly shorter than width of head, bent outwards, segment II about four times as long as I.

Pronotum smooth (in one specimen strigose on medial black spot of disc), noticeably constricted and narrowed anteriorly, collar very large, mesal length about equal to half the width of eyes, lateral margins sinuate in front of humeral angles (which are rounded), hind margin sinuate at middle and near humeral angles; mesoscutum exposed, scutellum long, slightly convex.

Hemelytra glassy, transparent, corium without nervures, scutellum laterally, a line following claval suture internally and embolio-corial commissure with a row of punctures; cuneus about three times as long as wide at base, membrane biareolate, large areola rounded apically. Legs long, tibiae densely and shortly pilose.

This genus differs from others in the tribe by the very wide collar, by the disc of pronotum strongly narrowed and constricted anteriorly and by the segment I of antenna bent outwards.

Key to the species of the genus *Hyaloplectus* n. gen

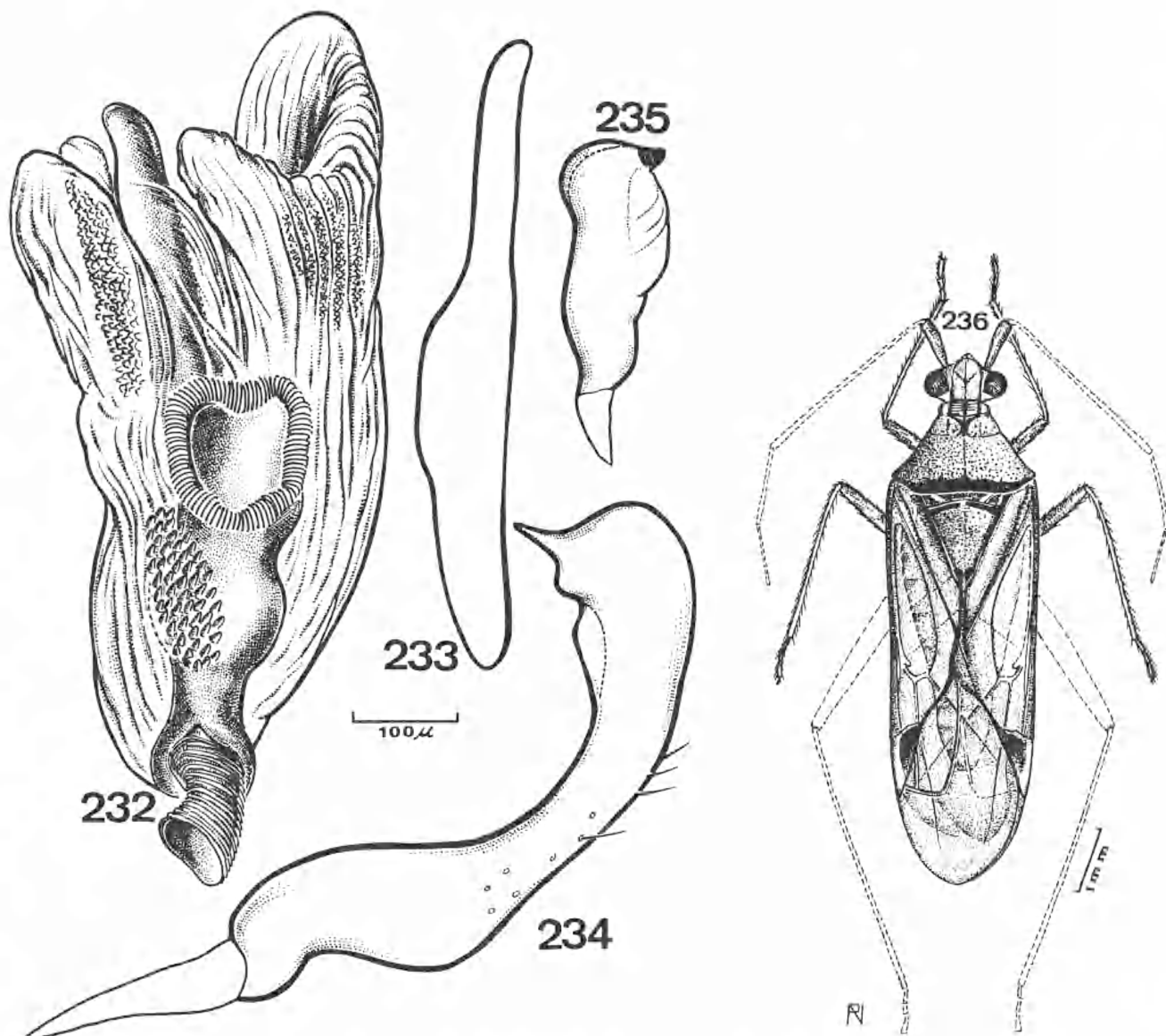
1. Collar black; cuneus red; size large, over 10 mm long
solomonicus n. sp.
- Collar pale with black vittae; cuneus pale; size medium, less than 9 mm long. *minor* n. sp.

Hyaloplectus minor, n.sp.

(Fig. 248)

Characterised by the colour and size.

Female: Length 8.7 mm, width 2.2 mm, *Head*: Length 1.0 mm, width 1.4 mm, vertex 0.60 mm. *Antenna*: Segment I, length 1.0 mm; II, 3.9 mm; III, 1.9 mm; IV, broken. *Pronotum*: Length 1.5 mm, width at base 2.0 mm. *Cuneus*: Length 1.00 mm, width at base 0.36 mm (holotype).



Figs. 232-235—*Hyalopeplus samoanus* Knight: Fig. 232—Vesica of aedeagus; Fig. 233—Spiculum of vesica; Fig. 234—Left paramere; Fig. 235—Right paramere.

Fig. 236—*Hyalopeplus bakeri* Poppius, male, holotype.

General coloration ochraceous with black areas; eyes and antenna light castaneous, apex of segment II, segment III and IV infuscate; collar with narrow median longitudinal line and two lower lateral vittae, two round spots at lateral margins of pronotum and two small spots at middle of disc, spots on mesosternum fuscous to black; hemelytra glassy, ochraceous, inner and outer margins of clavus, corium, cuneus and embolium (narrowly) fuscous; membrane hyaline, nervures brown. Underside of body and legs pale yellow, lateral margin of abdomen with a longitudinal reddish vitta. Pronotum and scutellum smooth.

Male: Unknown.

Holotype; female, SOLOMON ISLANDS: San Cristoval, Maniate, 6.viii.1960, C. W. O'Brien (BISHOP).

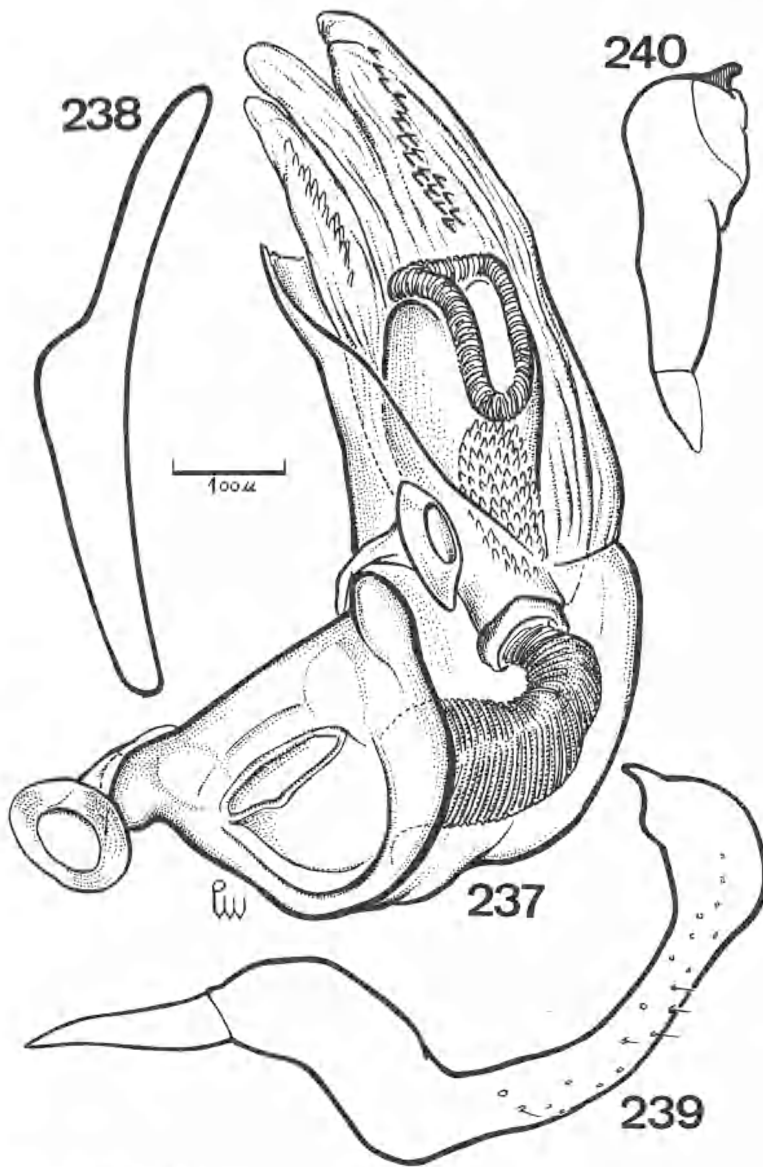
Differs from *Hyaloplectus solomonicus* n.sp. by the colour of cuneus, collar and by the smaller size.

Hyaloplectus solomonicus, n.sp.

(Figs. 249-252)

Characterised by the large size and by the colour of the collar and cuneus.

Male: Length 10.6 mm, width 3.2 mm. *Head*: Length 1.0 mm, width 1.6 mm, vertex 0.60 mm. *Antenna*: Segment I, length 1.2 mm; II, 5.0 mm; III, 1.4 mm; IV, 1.2 mm. *Pronotum*: Length 1.7 mm, width at base 2.4 mm. *Cuneus*: Length 1.40 mm, width at base 0.60 mm (holotype).



Figs. 237-240—*Hyalopeplus bakeri* Poppius: Fig. 237—Penis; Fig. 238—Spiculum of vesica; Fig. 239—Left paramere; Fig. 240—Right paramere.

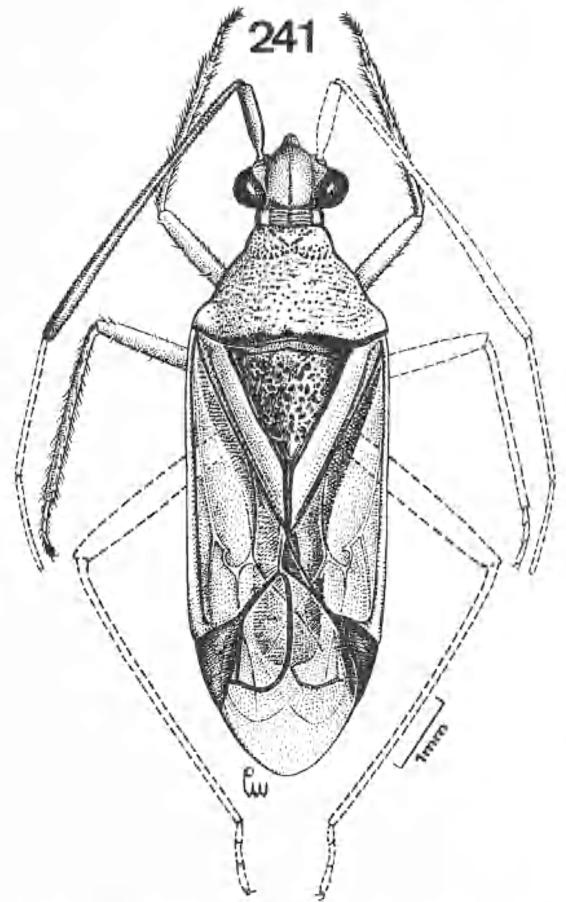


Fig. 241—*Hyalopeplus krishna* Ballard, female, lectotype.

General coloration ochraceous to castaneous with red and black areas; eyes and antennae castaneous, segment I paler, pronotum with collar, two large round spots laterally and a small strigose median longitudinal spot black; hemelytra glassy, transparent, clavus, embolium, cuneus, commissure and apical margin of corium, nervures of membrane red; membrane hyaline. Underside of body and legs pale yellow with reddish tinge.

Pronotum rugose on black median spot.

Genitalia: Penis (fig. 250) with a sclerotized spiculum and membranous lobes. Left paramere (fig. 251) curved, somewhat enlarged preapically, with pointed apex. Right paramere (fig. 252) small, ended by a sclerotized point.

Female: Similar to male in colour and general aspect. Length 11.1 mm, width 2.6 mm, vertex 0.60 mm (allotype).

Holotype: male, SOLOMON ISLANDS: Bougainville, Kukugau Vill., 150 m, xii.1960, W. W. Brandt (BISHOP). **Paratype:** female, Santa Isabel, Molao, 30.vi.1960, C. W. O'Brien.

Differs from *Hyaloplectus minor* n.sp. by the larger size, by the red cuneus and black collar.

Isabel Kirkaldy, 1902

Isabel Kirkaldy, 1902, p. 58; Poppius, 1912a, p. 417; Carvalho, 1955, p. 107; Carvalho, 1959, p. 321.

Isabellina Distant, 1904b, p. 415 (syn. by Reuter, 1910, p. 166).

Type-species: *Isabel ravana* (Kirby, 1891).

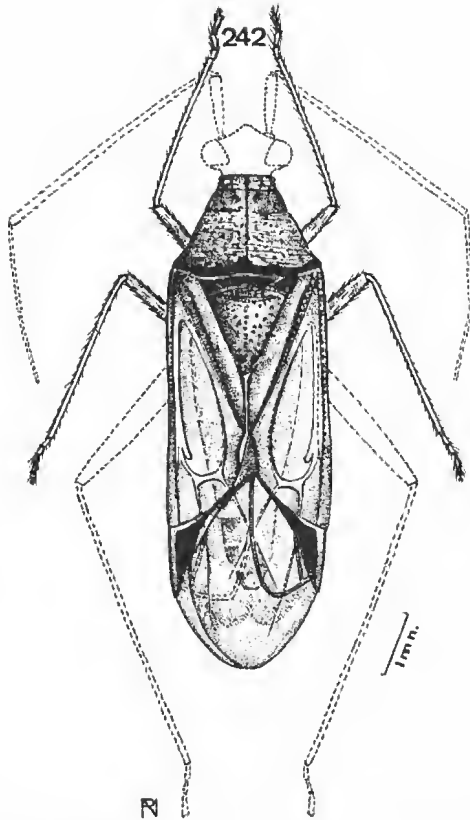
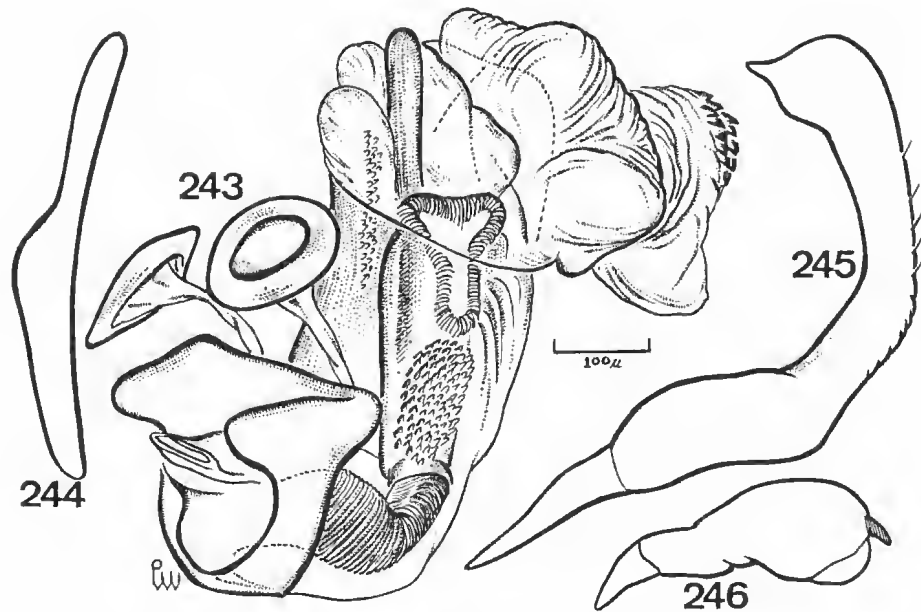


Fig. 242—*Hyalopeplus horvathi* Poppius, male, lectotype.

Body elongate, glabrous above. Head triangular, subhorizontal, vertex sulcate longitudinally, immarginate, clypeus and lorum visible from above, eyes well removed from anterior margin of pronotum, this distance being approximately equal to thickness of first antennal segment; rostrum reaching apex of posterior coxae; antennae moderately long, slender, segment I distinctly longer than width of head, segment II twice as long as I, slightly incrassate apically, segments III and IV slender, shortly pubescent.

Pronotum considerably narrowed anteriorly, collar with mesal length equal to thickness of first antennal segment, calli flat, separate at middle, reaching sides of pronotum, which are rounded, disc convex, rugose-punctate, with a central longitudinal and two lateral impressed strigose vittae, humeral angles subspinously produced and reflexed, hind margin broadly rounded; mesoscutum exposed, scutellum tumid, noticeably rugose (rugosities of basal angles extending also to fossae of mesoscutum).



Figs. 243-246—*Hyalopeplus horvathi* Poppius: Fig. 243—Penis; Fig. 244—Spiculum of vesica; Fig. 245—Left paramere; Fig. 246—Right paramere.

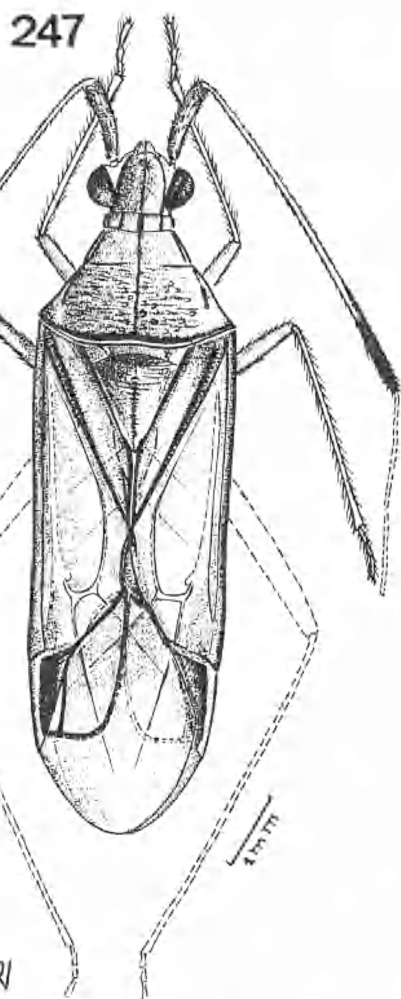


Fig. 247—*Hyalopeplus similis* Poppius, female, lectotype.

Hemelytra glassy, transparent, corium with costal nervure present only apically, clavo-corial and embolio-corial sutures with a row of punctures, cuneus longer than wide at base, membrane with large areola distinctly and acutely angulose apically. Legs of moderate length, hind femur incrassate, with numerous characteristic small black spines inferiorly, tibiae shortly spinose, parempodia divergent apically.

This genus is characterised by the apical nervure of corium, by the small black spines of hind femora and by the spinously produced and reflexed humeral angles of pronotum.

Isabel ravana (Kirby, 1891) Kirkaldy, 1902

Capsus ravana Kirby, 1891, p. 106, pl. 4, fig. 10;
Isabel ravana Kirkaldy, 1902, p. 58, pl. A, fig. 9,
pl. B, fig. 6; Reuter 1910, p. 97; Carvalho,
1959, p. 321.

Isabellina ravana Distant, 1904b, p. 417.

Isabel beccarii Poppius, 1912a, p. 417 (*n.syn.*).

Isabel horvathi Poppius, 1915a, p. 10 (*n.syn.*).

(Figs. 253-256)

Characterised by the silvery vittae on pronotum and scutellum and by the longitudinal, extrareolar, bent vittae of membrane.

Male: Length 7.8 mm, width 2.0 mm. *Head*: Length 0.8 mm, width 1.0 mm, vertex 0.48 mm. *Antenna*: Segment I, length 1.6 mm; II, 3.3 mm; III-IV, broken. *Pronotum*: Length 1.2 mm, width at base 2.1 mm. *Cuneus*: Length 0.96 mm, width at base 0.40 mm (lectotype—*Isabel beccarii* Poppius).

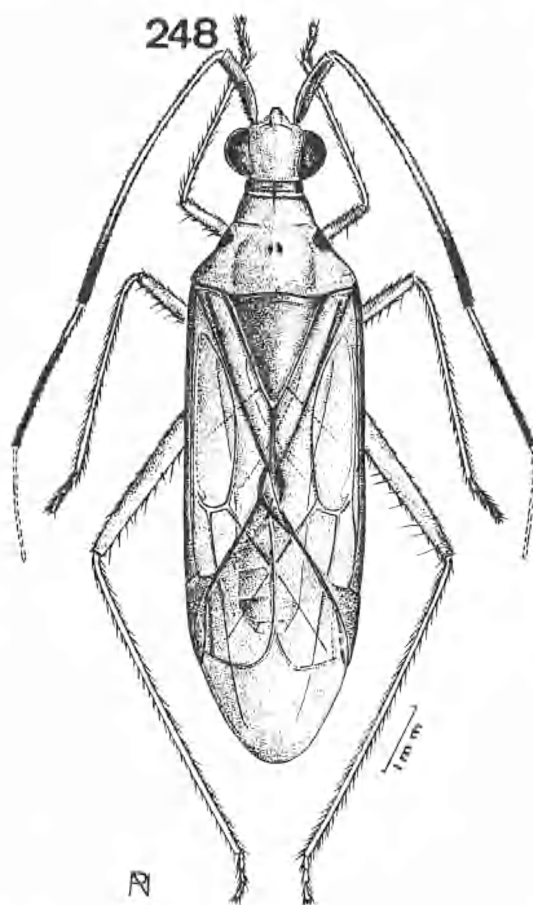


Fig. 248—*Hyaloplectus minor* n.sp., female, holotype.

General coloration pale testaceous to ochraceous, more or less mottled and speckled with castaneous to reddish; head with longitudinal vittae (the two median ones wider) and striations on frons reddish, clypeus, lorum, gula and portion behind eyes with brown vittae or spots, eyes and antennae brown, segment I speckled with black, apex of segment II castaneous to dark, segments III-IV castaneous, pale basally; pronotum with five longitudinal, and a transverse sub-basal, vittae whitish, covered by silvery pruinosity and darkened at each side, humeral angles black, hind margin narrowly pale; mesoscutum and scutellum reddish to brown; three longitudinal pale to whitish vittae (one central,

two lateral); hemelytra ochraceous, transparent or semi-transparent, commissures, cuneus and nervures of membrane reddish, embolium in some specimens with four dark spots (basal, apical and two sub-median), the cuneus totally red or castaneous or with this colour only marginally; membrane hyaline with two characteristic apical bent longitudinal vittae brown to black. Legs pale yellow, speckled with brown, abdomen with a wide lateral brown band and small reddish dots ventrally, femora and tibiae pale with numerous brownish dots or bars, extreme apex reddish, the hind femur mostly brown with numerous black short spines ventrally, hind tibiae with a sub-basal wide brown band.

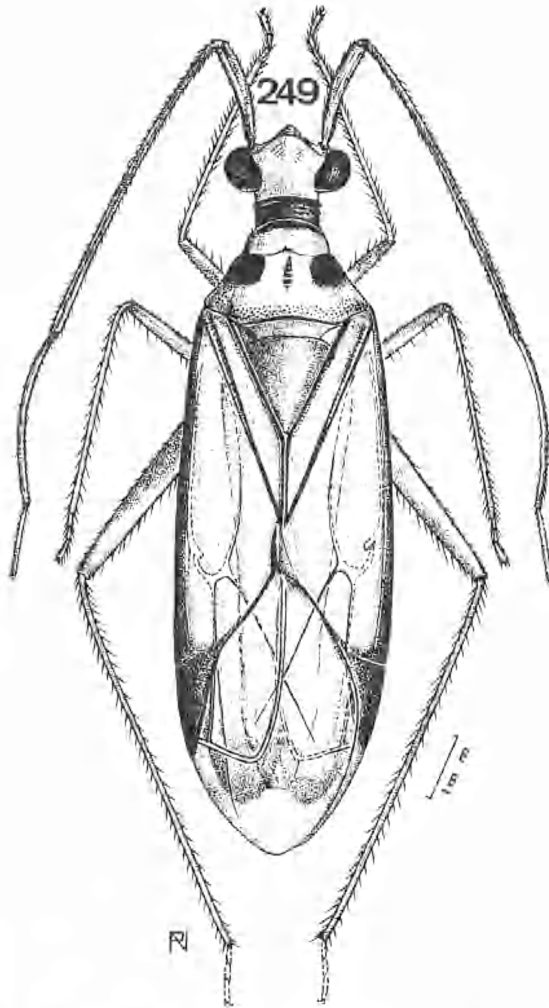


Fig. 249—*Hyaloplectus solomonicus* n.sp., male, holotype.

Genitalia: Penis (fig. 254) with membranous lobes and fields of sclerotized teeth. Left paramere (fig. 255) strongly curved, apex blunt. Right paramere (fig. 256) small, with a typical apical curved point.

Female: similar to male in colour and general aspect, slightly more robust.

Geographical distribution: Burma, China, Formosa, Sri Lanka, Sumatra, New Guinea, Philippines.

Specimens studied: lectotype (new designation), male, SUMATRA: Mt. Singaland, vii.1978, O. Beccari (*Isabel beccarii* Poppius) (HELSINKI); PHILIPPINES: Albay Prov., Mt. Mayon, 16 km NW of Lagaspi, 900-1 500 m, 4.v.1962, H. M. Torrevillas; IRIAN JAYA: Wamena, 1 700 m, 10-25.ii.1960, T. C. Maa; BURMA: Nam Tamai Valley, 23.vii.1938, R. Kaulback, alt. 3 000 ft (BMNH); SOUTH CHINA: Kwantung, Su-Ling-Paei, Yaoshan District, Sept 30, 1934, F. K. To (BMNH).

The specific characters pointed out by Poppius for *Isabel beccarii* and *Isabel horvathi* are within the range of variation of the species and appears even in single individuals. The two species must be treated as synonyms of *ravana* (Kirby).

Kosmiomiris Kirkaldy, 1902

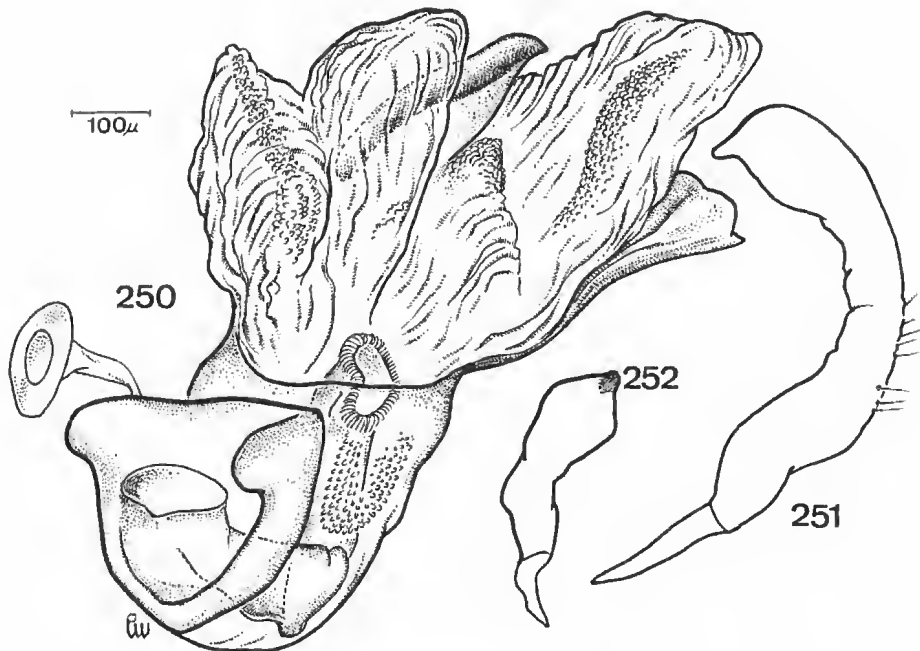
Kosmiomiris Kirkaldy, 1902, p. 253; Poppius, 1912a, p. 433; Carvalho, 1955, p.106; Carvalho, 1959, p. 321.

Type-species: *Kosmiomiris rubroornatus* Kirkaldy, 1902=*Capsus lucidus* Walker, 1873.

Body elongate oval, beset with fine and erect pubescence. Head small, transverse, short, vertical in front of the eyes, vertex superficially sulcate longitudinally, immarginate, eyes removed from collar by a space about equal to thickness of first antennal segment, straight posteriorly, angulose at inner hind margin, occupying two thirds of head when seen from side, clypeus flat, jugum and lorum long, narrow, buccula small, rostrum very long, reaching to 6th abdominal segment; antenna inserted level with upper portion of eye, cylindrical, segment II slightly incrassate, shortly pubescent, about twice as long as I, which is about as long as width of head.

Pronotum convex, deep and coarsely punctate, lateral margins rounded, calli small and flat, collar narrow and smooth, hind margin of disc straight at middle, oblique near humeral angles; mesosternum covered, scutellum strongly tumid, smooth or with sparse punctures (in some geographical populations the scutellum is punctured).

Hemelytra without nervures, glassy transparent (except on reddish or black areas), clavo-corial and embolio-corial sutures with a row of punctures, cuneus distinctly longer than wide at base, large areola rounded apically. Legs of moderate length, tibiae dense and shortly pilose, the spines of hind pair about as long as thickness of segment.



Figs. 250-252—*Hyaloplectus solomonicus* n.sp.: Fig. 250—Penis;
Fig. 251—Left paramere; Fig. 252—Right paramere.

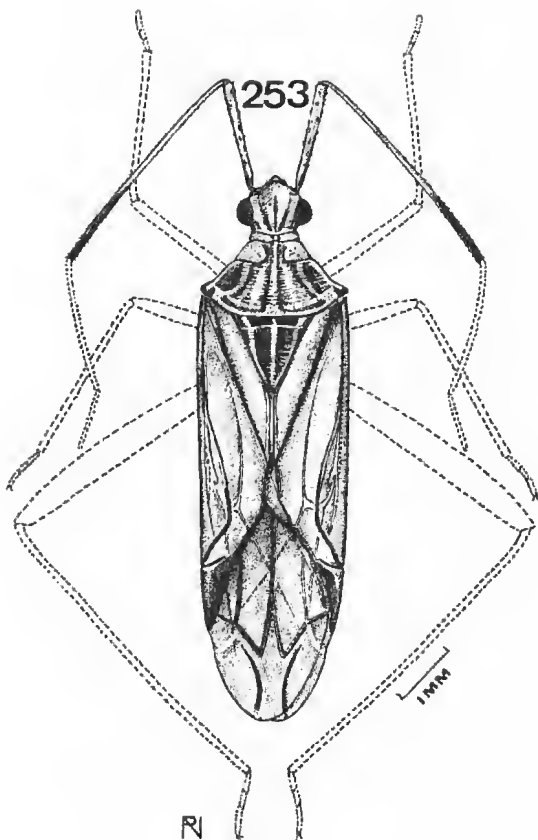


Fig. 253—*Isabel beccarii* Poppius, male, holotype.

The genus is characterised by the coarsely punctate pronotum, by the very long rostrum and by the smooth collar. It differs from *Guianerius* Distant by the length of the rostrum, by the structure of pronotum and by the insertion of antenna on frons.

***Kosmiomiris rubroornatus* Kirkaldy, 1902**

Capsus lucidus Walker, 1873, p. 124 (n. preoc. by *Capsus lucidus* Kirschbaum, 1855).

Kosmiomiris rubroornatus Kirkaldy, p. 253, pl. f, fig. 4; pl. 6, fig. 6; Poppius, 1912a, p. 434; Carvalho, 1959, p. 322.

Kosmiomiris lucidus Distant, 1904a, p. 106.

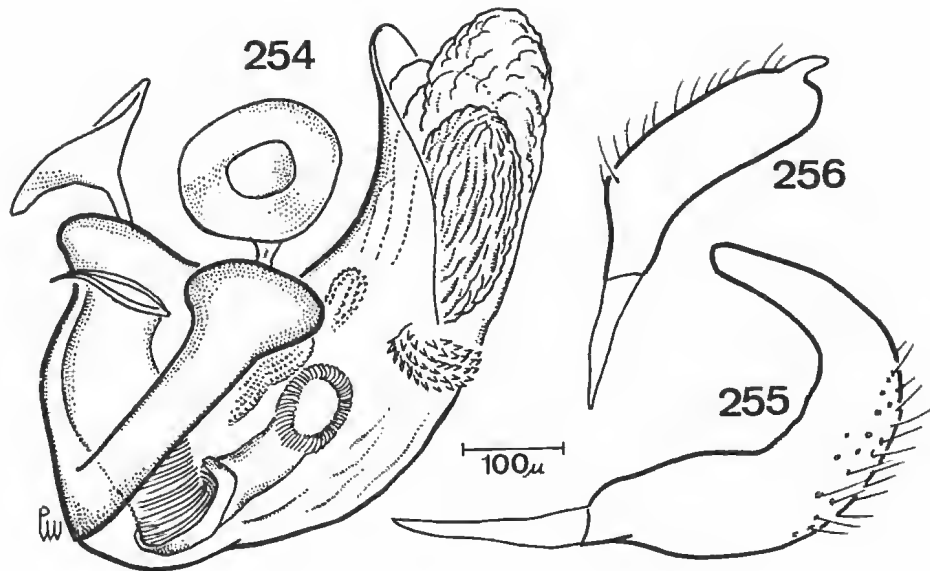
Kosmiomiris modigliani Poppius, 1912a, p. 433 (N.SYN.).

Kosmiomiris scutellaris Poppius, 1912a, p. 433, (n.syn.).

(Figs. 257-264)

Characterised by the colour of the body and by the structure of male genitalia.

Male: Length 4.6-6.4 mm, width 1.8-2.1 mm. **Head:** Length 0.4-0.7 mm, width 0.5-1.3 mm, vertex 0.44-0.48 mm. **Antenna:** Segment I, length 0.8-1.1 mm; II, 1.6-2.3 mm; III 1.0 mm; IV, 0.7 mm. **Pronotum:** Length 0.7-0.8 mm, width at base 0.30-0.40 mm.



Figs. 254-256—*Isabel ravana* Distant: Fig. 254—Penis; Fig. 255—Left paramere; Fig. 256—Right paramere.

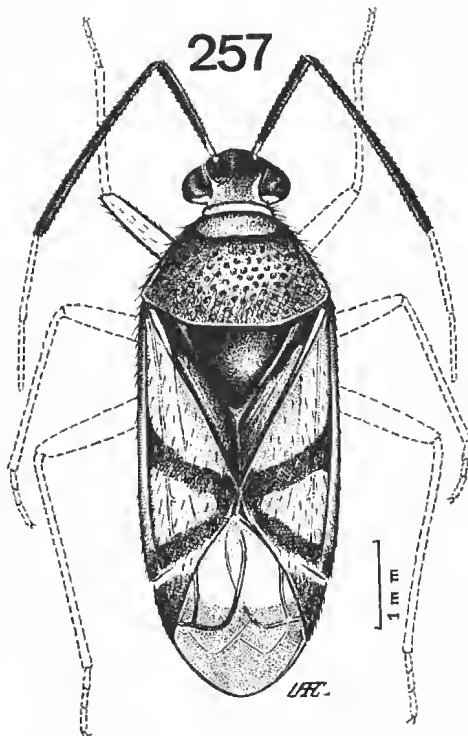
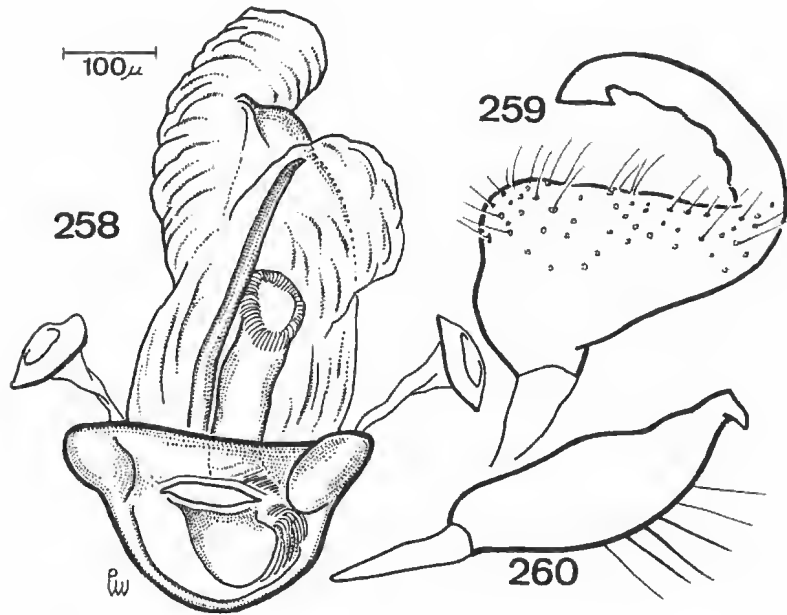


Fig. 257—*Capsus lucidus* Walker, male, holotype.

General coloration ochraceous with brown, black and reddish areas; apex of abdomen, basal half of posterior tibiae and antennae black (in some specimens the basal third or the extreme base of segment III whitish, this variation occurs in specimens taken at the same locality, by the same collector, and on same day); pronotum, scutellum, cuneus (more or less), clavus at base, nervures and apical portion of membrane dull brownish black; clavus in a more or less extensive arc (except basal portion), a characteristic V-shape spot (with apex on corial commissure) red; corium (except reddish areas), a cross bar at base of scutellum and base of membrane pale, transparent (in some specimens the whole membrane is black). Underside of body (except black apex of abdomen) pale, femora reddish, tibiae I and II pale brown, tibiae III black, pale apically, tarsi pale.

Genitalia: Penis (figs. 258, 262) with a characteristic sclerotized cylindrical spiculum and membranous lobes. Left paramere (figs. 259, 263) enlarged basally, strongly curved at middle. Right paramere (figs. 260, 264) widest at middle, with a curved apical point.



Figs. 258-260—*Kosmiomiris rubroomatus* Kirkaldy: Fig. 258—Penis; Fig. 259—Left paramere; Fig. 260—Right paramere.

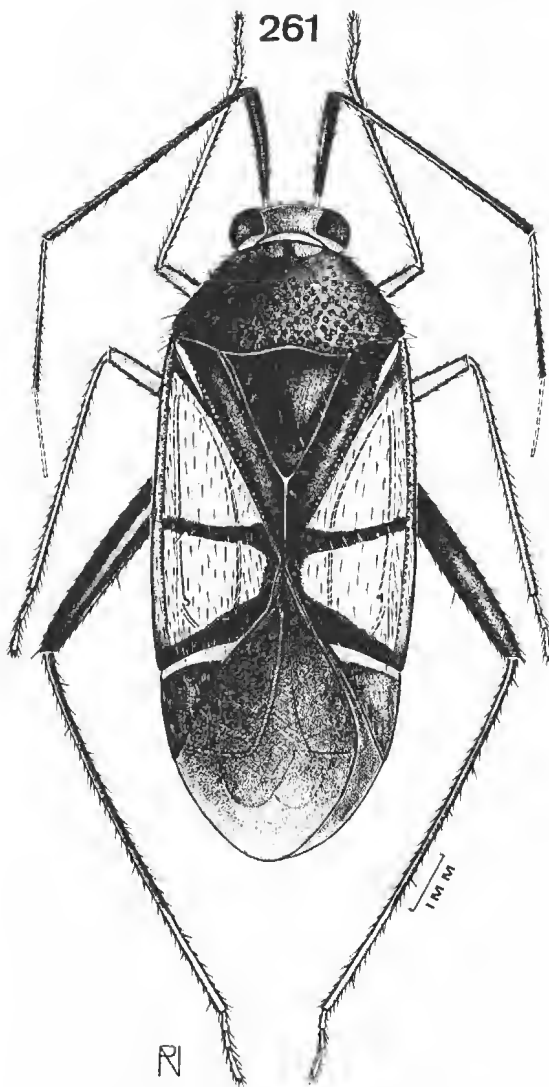
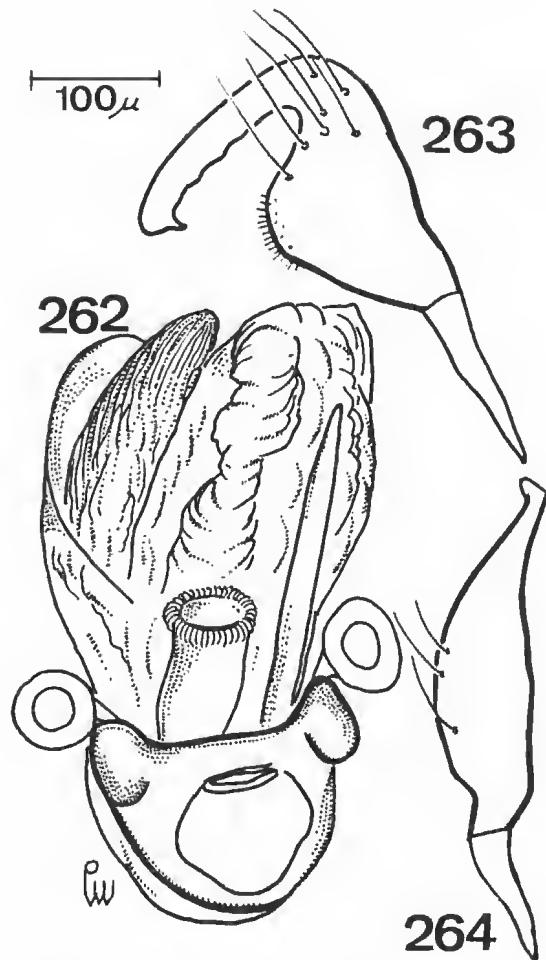


Fig. 261—*Kosmiomiris modigliani* Poppius, female.



Figs. 262-264—*Kosmiomiris modigliani* Poppius: Fig. 262—Penis; Fig. 263—Left paramere; Fig. 264—Right paramere.

Female: Similar to male in colour and general aspect but noticeable more robust. Length 7.3-5.0 mm, width 2.5-2.0 mm, vertex 0.48-0.50 mm.

Geographical distribution: Borneo, Malay Peninsula, Philippines, Thailand, Sarawak, Sumatra, Malacca.

Specimens studied: male, holotype, 294, PENINSULAR MALAYSIA: *Capsus lucidus* Walker, Saunders, 65.13; sar., type (printed on green-bordered disc) (BMNH); female lectotype (new designation), Museum Paris. Perak coll. Noulhier, 1898 (*Kosmimiris scutellaris* Poppius) (HELSINKI); Selangor, Bukit Kutu, 3 300 ft, ix.1932, H. M. Pendelbury; Kuala Lumpur, xii.1939; INDONESIA: paralectotype, male, Soekaranda, Sumatra, Januar. 1894, Dohrn (HELSINKI); EAST MALAYSIA: SE Forest camp, 19 km N of Kalabakan, 60 m, 24.x.1962; Gomatong caves, 22-26.xi.1958, T. C. Maa; Sandakan Bay (NW) Sepilok For. Res., 1-10 m, 28.x.1957, J. L. Gressitt; id. Sapagaya Lumber Camp; Samawang; Sadong, Kampong Tapuh, 300-400 m, 10.vii.1958; PHILIPPINES: Palawan Mantalingajan, Pinigisan, 600 m, 22.ix.1961, Noona Dan Exp. 61-62; PENINSULAR THAILAND: Nakon Sri Tam trat, Khao Huang, 2 500 ft. iii.1922, H. M. Pendelbury, in the Collections of BISHOP, BMNH and AMNH.

This species seems to vary in colour and also in size. The amount of red and black color on the clavus varies in individuals taken at the same place, by the same collector and on the same date. Females tend to have the red coloration more extensive. The same applies to the size, especially in populations from different geographical areas. Poppius based his species description mostly on the size and the colour of membrane. In the series of specimens from Borneo and Sumatra the membrane may be totally black, pale basally or pale only apically.

Due to this colour and also size variation and also the regular and uniform pattern of the genitalia the Poppius species are here considered as synonyms of *rubroornatus* Kirkaldy.

The types of *scutellaris* Poppius and *rubroornatus* were studied. *Kosmimiris modigliani* Poppius is said to be in Genova (Giacomo Doria Museum of Natural History) but the type could not be seen because that Museum does not loan types for study.

Macrolonius Stål, 1870

Macrolonius Stål, p. 670; Poppius, 1912a, p. 432; Carvalho, 1955, p. 106; Carvalho, 1959, p. 322.

Type-species: *Macrolonius sobrinus* (Stål, 1855).

Body elongate, glabrous, sides parallel. Head vertical, vertex wide, immarginate, eyes contiguous with collar, clypeus, jugum and lorum flat, buccula prominent, rounded, convex gula, rostrum reaching hind coxae; antenna inserted at level of middle portion of eyes, cylindrical, segment I longer than width of head, shortly pubescent.

Pronotum punctate, including collar, calli small, median portion slightly carinate, collar narrow, its mesal length slightly greater than thickness of first antennal segment, lateral margins rounded, hind margin straight, oblique near humeral angles, mesoscutum covered, scutellum flat, punctate, apical portion prominent, rounded.

Hemelytra glassy, transparent, without nervures, clavus opaque, clavo-corial and embolio-corial sutures with a row of punctures, cuneus very long, about four times as long as wide at base, large areola rounded apically. Legs long, cylindrical, shortly pubescent, tibiae shortly spinulose.

The genus differs from other *Hyalopeplini* with coarsely punctate pronotum and scutellum by its large size, very long cuneus, large areola of membrane reaching well below apex of cuneus and by the punctate collar.

Key to the species of the genus *Macrolonius* Stål

1. Head seen from above unicolorous; pronotum with a median dark-brown spot on disc, not reaching lateral margins; collar pale *sobrinus* (Stål)
Head seen from above with dark spots or vitta; pronotum with a median black spot reaching lateral margins; collar black 2
2. Head with a median black longitudinal vitta; lateral margins of pronotum with a single pale spot behind calli *superbus* (Distant)
Head black with a semilunar pale spot above; lateral margins of pronotum with two pale spots (one behind calli and one at humeral angle) *schenklingi* (Poppius)

Macrolonius schenklingi (Poppius, 1915) Carvalho, 1959

Malalasta schenklingi Poppius, 1915a, p. 21;
Macrolonius schenklingi Carvalho, 1959, p. 322.

(Fig. 265)

Characterised by the colour of head and pronotum.

Female: Length 10.2 mm, width 2.1 mm. *Head*: Length 0.6 mm, width 1.4 mm, vertex 0.56 mm. *Antenna*: Segment I, length 1.8 mm; II, 2.8 mm; III and IV, broken. *Pronotum*: Length 1.6 mm, width at base 2.5 mm. *Cuneus*: Length 1.68 mm, width at base 0.40 mm (lectotype).

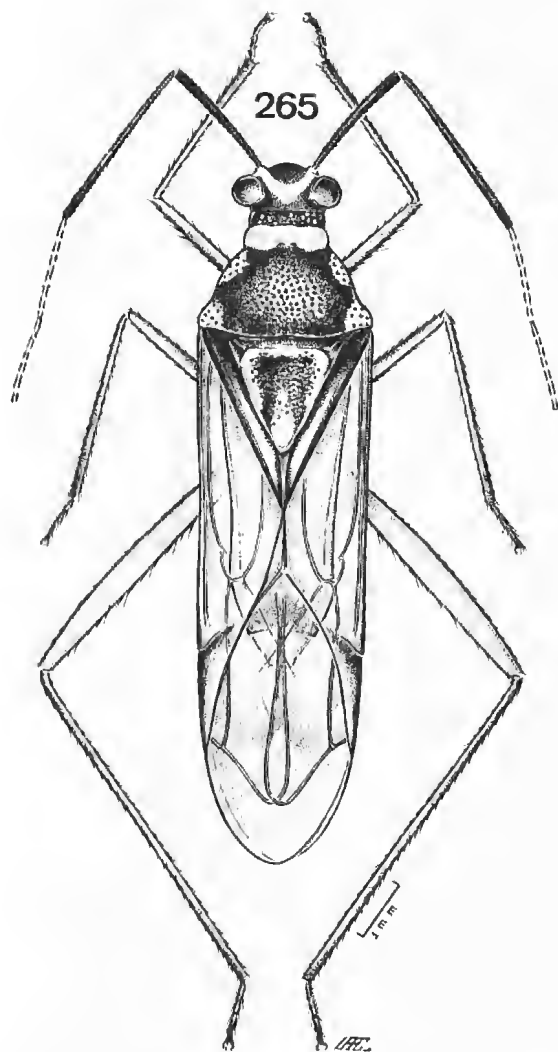


Fig. 265—*Malalasta schenklingsi* Poppius, female, lectotype.

General coloration ochraceous to pale yellow with dark brown to black areas; head black with a semilunate pale spot on vertex and frons, eyes and antennae black; pronotum black with calli and two spots on lateral margins (one behind calli and one on humeral angle) pale to lutescent; scutellum citrine with two longitudinal vittae fused basally; hemelytra glassy, transparent, clavus and cuneus opaque, brown to black, the first in the middle and the second at inner portion pale to lutescent, membrane hyaline. Underside of body and legs pale yellow, hind tibiae tending to brown, tarsi fuscous.

Pronotum slightly sinuate laterally, mesoscutum partially exposed, nervures of membranes very long, the large areolae rounded apically, superposing each other, cuneus very long.

Male: Unknown.

Geographical distribution: Formosa.

Specimens studied: female, lectotype (new designation), FORMOSA: Fuhosho, 7.ix., H. Sauter (HELSINKI).

This species differs from the two others in the genus by the colour of head, lateral margins of pronotum and by the length of cuneus.

Macrolonius sobrinus (Stål, 1855) Stål 1870

Capsus sobrinus Stål, 1835, p. 186.

Macrolonius sobrinus Stål, 1870, p. 670 Poppius, 1912a, p. 433; Carvalho, 1959, p. 323.

Capsus discoidalis Walker, 1873, p. 122 (n.syn.)

Malacoepelus discoidalis Carvalho, 1959, p. 322.

(Fig. 266-270)

Characterised by the colour of head and pronotum.

Female: Length 9.6 mm, width 2.4 mm. *Head*: Length 0.4 mm, width 1.4 mm, vertex 0.72 mm. *Antenna*: Segment I, Length 1.8 mm; II, 3.0 mm; III, 1.6 mm; IV, broken. *Pronotum*: Length 1.9 mm, width at base 2.4 mm. *Cuneus*: Length 1.16 mm, width at base 0.48 mm (lectotype of *discoidalis* Walker).

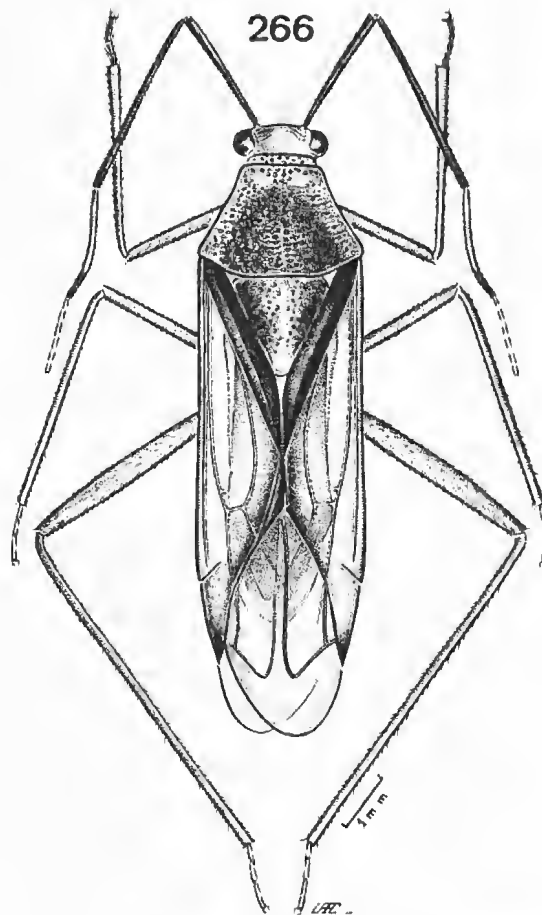
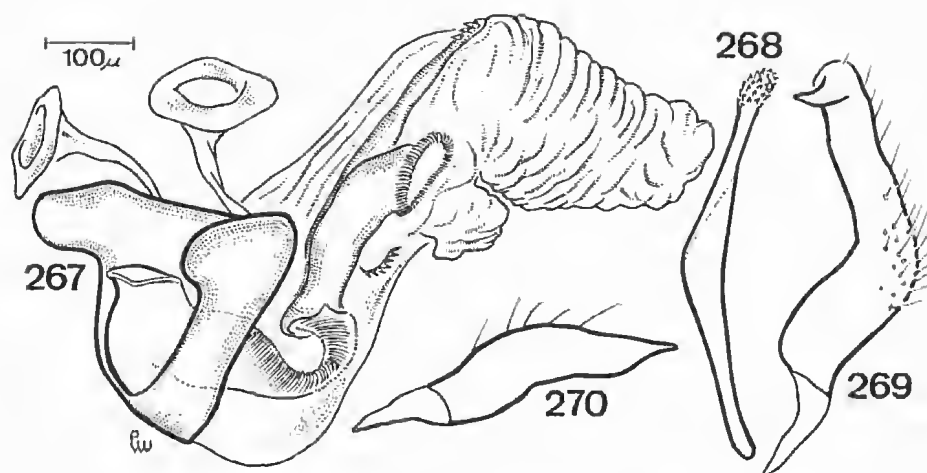


Fig. 266—*Capsus discoidalis* Walker, female, lectotype.



Figs. 267-270—*Macrolonius sobrinus* (Stal): Fig. 267—Penis; Fig. 268—Spiculum of vesica; Fig. 269—Left paramere; Fig. 270—Right paramere.

General coloration ochraceous to lutescent with brown to citrine areas; head, pronotum and scutellum lutescent to citrine, eyes and antennae (except base of segment III which is pale) castaneous, segment II darker towards apex; a central spot on disc of pronotum reaching posterior margin, clavus, two lateral spots on scutellum, corial commissure and inner apical margin of corium, outer margin of embolium and outer margin of cuneus, nervures of membrane fuscous to brown; cuneus and embolium lutescent, fuscous apically; clavus and cuneus opaque. Underside of body and legs pale yellow, hind tibiae brown, pale apically, tarsi fuscous.

Male—Similar to female in colour and general aspect, less robust.

Genitalia: Penis (fig. 267) with membranous lobes, fields of sclerotized teeth and a characteristic spiculum (fig. 268). Left paramere (fig. 269) curved, pointed apically. Right paramere (fig. 270) small, tapering to apex.

Geographical distribution: Borneo, Java, Malacca, Singapore, Sumatra, Sarawak, Malay Peninsula.

Specimens studied: female, lectotype (new designation), SINGAPORE, Saunders, 65-13, type (printed on green-bordered disc). 286, *Capsus discoidalis*; id. paralectotype (abdomen, wings and hemelytra missing), Mal. CA. Saunders, 65-13 (BMNH); INDONESIA: Somgei, Lalah, Indragiri, Sumatra, W. Burchard, 26.viii.1901; EAST MALAYSIA: W. Coast Residence, Ranau, 500 m, 22-25.i.1959, T. C. Maa; id. 28.ix.1958; id. 30.iv.-5.x.1958; L. W. Quate; Ranai, 8 m N Paung Host Springs, 500 m, 8-11.x.1958, T. C. Maa (BISHOP) Sandakan, Baker, (USNM); PENINSULAR MALAYSIA: Pahang, F.M.S. Jerantut, March,

1927; Kuala Lumpur, March 27, 1932; SINGAPORE: Selitar, Aug. 1911 (BMNH).

Differs from *Macrolonius schenklingi* Poppius and *Macrolonius superbus* (Distant) by the colour of the head and pronotum.

Macrolonius superbus (Distant, 1904) Carvalho, 1952

Malalasta superba Distant, 1904b, p. 446, fig. 287.

Macrolonius superbus Carvalho, 1959, p. 323.

(Fig. 271)

Characterised by the colour of head and pronotum.

Male: Length 8.2 mm, width 1.7 mm. *Head*: Length 0.5 mm, width 1.2 mm, vertex 0.56 mm. *Antenna*: Segment I, length 2.0 mm; II, 3.4 mm; III-IV, broken. *Pronotum*: Length 1.5 mm, width at base 2.0 mm. *Cuneus*: Length 1.28 mm, width at base 0.32 mm (lectotype).

General coloration pale ochraceous to stramineous with black areas; head (except pale spots along inner margin of eyes), pronotum (except area of calli and pale marginal spot behind calli) black; scutellum ochraceous to pale with two longitudinal black spots (one at each side); hemelytra glassy, transparent, clavus and cuneus opaque, black to fuscous; membrane hyaline, nervures fuscous. Underside of body pale yellow, abdomen with a black transverse spot on each side, anterior margin of penultimate segment and some apical spots black; apices of posterior femora, extreme bases, apices and a central annulation to posterior tibiae, the antennae (except base of first and third joints basally) brown to fuscous.

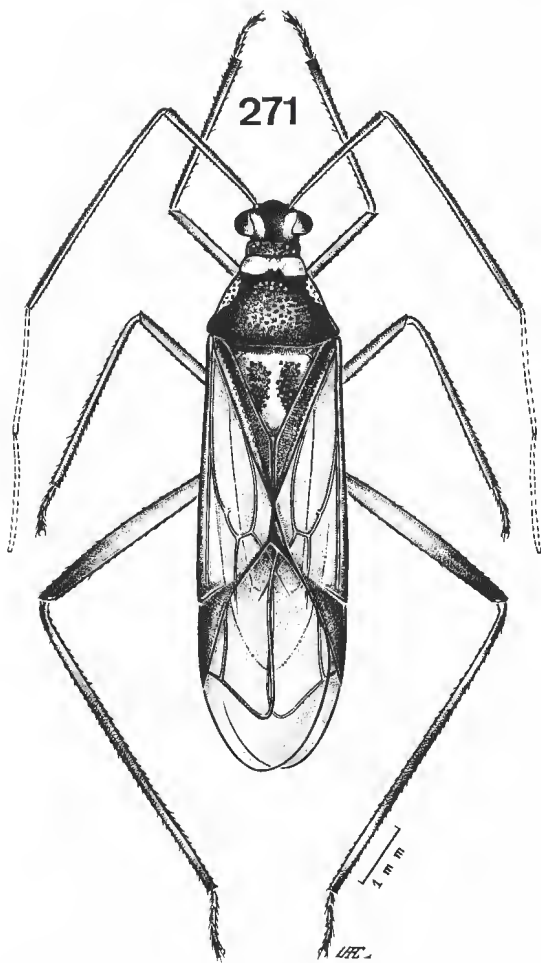


Fig. 271—*Malalasta superba* Distant, male, lectotype.

Pronotum not sinuated laterally, nervures of membrane superposing each other along median line.

Genitalia: Not dissected as the author had access only to the lectotype.

Female: Similar to male in colour and general aspect.

Geographical distribution: Burma.

Specimens studied: male lectotype (new designation), Tenass Valley, Myiita (Doherty), distant Col. 1913-383, type (printed in red bordered disc, *Malalasta superba* Distant (author's handwriting) (BMNH)).

This species differs from *Macrolonius schenklingi* (Poppus) by the colour of head and lateral margins of pronotum.

Onomaus Distant, 1904

Onomaus Distant, 1904b, p. 416; Poppus, 1912a, p. 438; Carvalho, 1955, p. 107; Carvalho, 1959, p. 323.

Type-species: *Onomaus pompeus* Distant, 1904.

Body sub-elongate, smooth, with long and erect hairs on scutellum. Head slightly sulcate on vertex, hind border immarginate, eyes well separated from collar, placed near middle of head; antenna with segment I twice as long as width of head, cylindrical, segment II twice as long as I, shortly pubescent; rostrum reaching the posterior coxae.

Pronotum sub-triangular, constricted behind calli and narrowed anteriorly, collar also narrow, its mesal length about equal to thickness of first antennal segment, disc tumid, inclined forwards, posterior margin curved at lateral angles which are sub-prominent; scutellum tumid with long, erect pubescence, mesoscutum slightly exposed.

Hemelytra with lateral margin slightly sinuate, transparent, without nervures, cuneus about two and half times as long as wide at base, apex of large areola angulate, Legs long and slender, tibiae moderately spinulose.

Differs from *Rambea* Poppus, 1912 which has also a long first antennal segment and erect pubescence by the larger size and by the shorter pubescence on tibiae, as well as by the long cuneus.

Key to the species of the genus *Onomaus* Distant

1. Eyes situated at middle of head, space between eye and collar approximately equal to diameter of eye; species of medium size, less than 7 mm long . . . *elegans* Poppus.
Eyes not situated at middle of head or if so then space between eye and collar less than diameter of eye; species over 7 mm long 2
2. Scutellum with a median longitudinal black vitta; species of large size (10 mm long) *pompeus* Distant
Scutellum with three spots (one at apex and two lateral); species of medium size (8 mm long) *lautus* (Uhler)

Onomaus elegans Poppus, 1915

Onomaus elegans Poppus, 1915b, p. 6; Carvalho, 1959, p. 323.

(Fig. 272)

Characterised by the colour of pronotum and position of eyes on head.

Male: Length 6.2 mm, width 1.4 mm. *Head*: Length 0.4 mm, width 0.8 mm, vertex 0.36 mm. *Antenna*: Segment I, length 1.4 mm; II, 2.9 mm; III, 2.0 mm; IV, 1.8 mm. *Pronotum*: Length 1.0 mm, width at base 1.3 mm. *Cuneus*: Length 0.96 mm, width at base 0.40 mm.

General coloration pale yellow to stramineous with dark brown areas; head pale with extreme posterior margin of vertex, spots behind eyes and extreme apex of clypeus black; eyes brown, clypeus towards base, frons anteriorly, jugum, lorum with reddish tinge; antenna black, extreme base of segment I pale; posterior margin of collar, carina of

lateral margin of pronotum anteriorly, two longitudinal median vittae, enlarged as a spot behind calli and at posterior margin of disc (divided by a longitudinal pale yellow narrow vitta), spots (one at each side) near humeral angles dark brown, area of calli, sub-median posterior area of disc and posterior margin of pronotum narrowly pale yellow; mesoscutum dark brown, scutellum pale yellow with a narrow longitudinal median vitta and apex black; hemelytra pale yellow, glassy, transparent, a basal spot, clavo-scutellar margin, sub-basal vitta on corium, apical spot on clavus, a characteristic sub-rectangular fascia or spot on corium, with anterior and posterior angles reaching outwards forming a semi-circle, inner and apical margin of cuneus brown; membrane transparent, pale with apical end dark. Underside of body pale yellow, propleura, a spot on meso and metapleura dark brown; abdomen pale yellow with basal portion, lateral spots and apex reddish; coxae and legs pale yellow, hind femora with two red rings (sub-median and apical).

Eyes situated at middle of head, distant from collar by a space approximately equal to diameter of eye.

Genitalia: Penis with membranous lobes provided with apical sclerotized teeth. Left paramere falciform, narrowing to extremity. Right paramere smaller, tapering to apex.

Female: Similar to male in colour and general aspect. Length 6.4 mm, width 1.4 mm, vertex 0.36 mm.

Specimens studied: two males and three females, UPPER BURMA: alt. 3 000 ft., Lat. N 27° 42' Long. E 97° 54', Nam Tamai Valley, 26.viii.1938, R. Kaueback, BM 1938-741 (BMNH and author's collection).

This species differs from *Onomaus pompeus* Distant, 1904 by its smaller size and by the colour of pronotum.

***Onomaus lautus* (Uhler, 1896) Poppius, 1912**

Dicyphus lautus Uhler, 1896, p. 267.

Onomaus lautus Poppius, 1912a, p. 439; Carvalho, 1959, p. 323.

Dicyphus lautus Esaki et auct., 1952, p. 261, fig. 686.

(Figs. 273-276)

Characterised by the colour of scutellum and membrane.

Male: Length 8.0 mm, width 2.4 mm. *Head:* Length 0.6 mm, width 1.0 mm, vertex 0.44 mm, *Antenna:* Segment I, length 1.2 mm, II, 2.8 mm; III, 1.8 mm; IV, mutilated. *Pronotum:* Length 1.2 mm, width at base 1.8 mm. *Cuneus:* Length 1.20 mm, width at base 0.60 mm.

General coloration pale yellow with brown and reddish areas; head brown to black with a pale transverse spot on vertex; antenna castaneous, apical portion of segment II black, basal half of segment III pale; pronotum brown to dark brown, collar and a large spot on middle of disc pale yellow, the latter with a black, rugose spot at its middle; mesoscutum fuscous, scutellum pale yellow with basal angles and apex brown to black; hemelytra pale yellow with basal angles and apex brown to black; hemelytra pale yellow, glassy, transparent, clavus (except middle portion and apex), a quadrate spot on corium extending outwards to embolium (at middle of corium), extreme apex of corium and apex of embolium brown to castaneous or reddish; membrane with basal half of areolar area dark, the extrareolar portion fuscous with two pale spots at each side. Underside of body pale yellow, propleura black with lower area pale, a spot on metapleura fuscous; abdomen with segment II (first visible) and a longitudinal lateral vitta on segments III-VIII

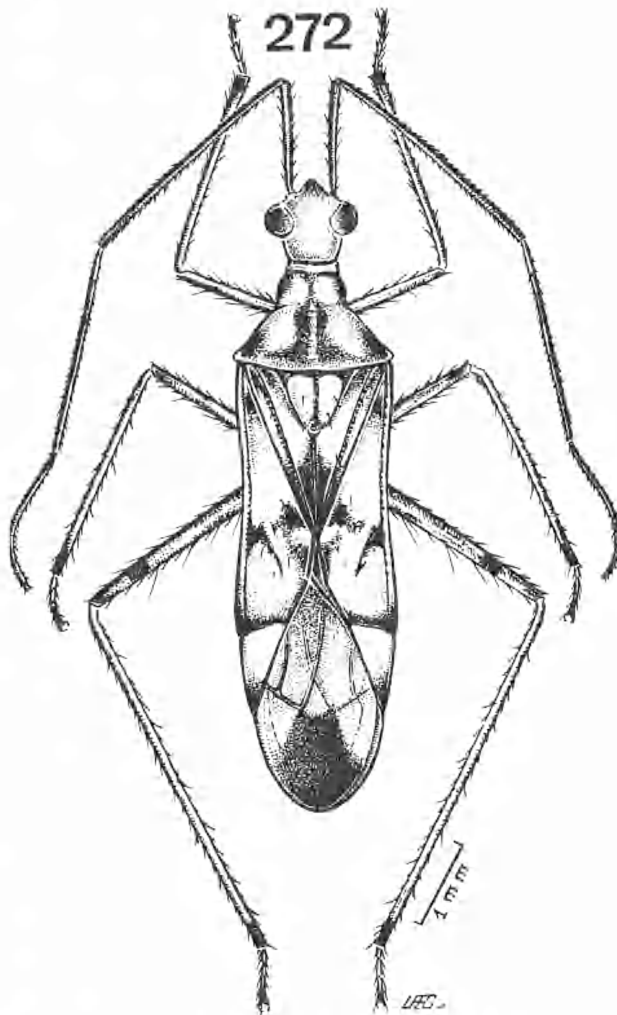


Fig. 272—*Onomaus elegans* Poppius, male.

castaneous to reddish; femora reddish (except base and a narrow median ring), tibiae pale, base and apex reddish.

Genitalia: Penis (fig. 274) with membranous lobes provided with sclerotized apical teeth. Left paramere (fig. 275) falciform. Right paramere (fig. 276) with pointed apex.

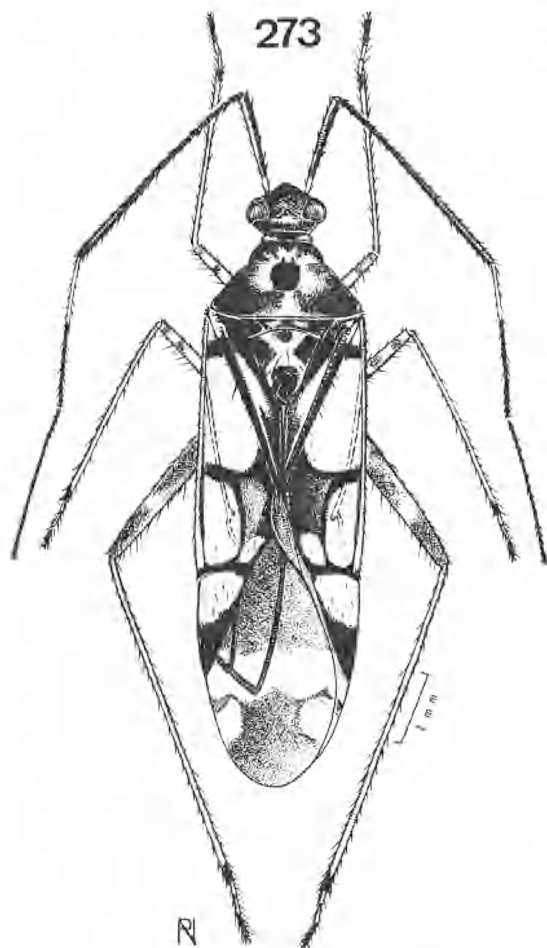


Fig. 273—*Onomaus lautus* (Uhler), female.

Female: Similar to male in colour and general aspect, slightly more robust.

Geographical distribution: Japan.

Specimens studied: two females and one male, JAPAN: Mitsukuri, Takao, vii.14.1930, J. L. Gressitt, in the collection of the author.

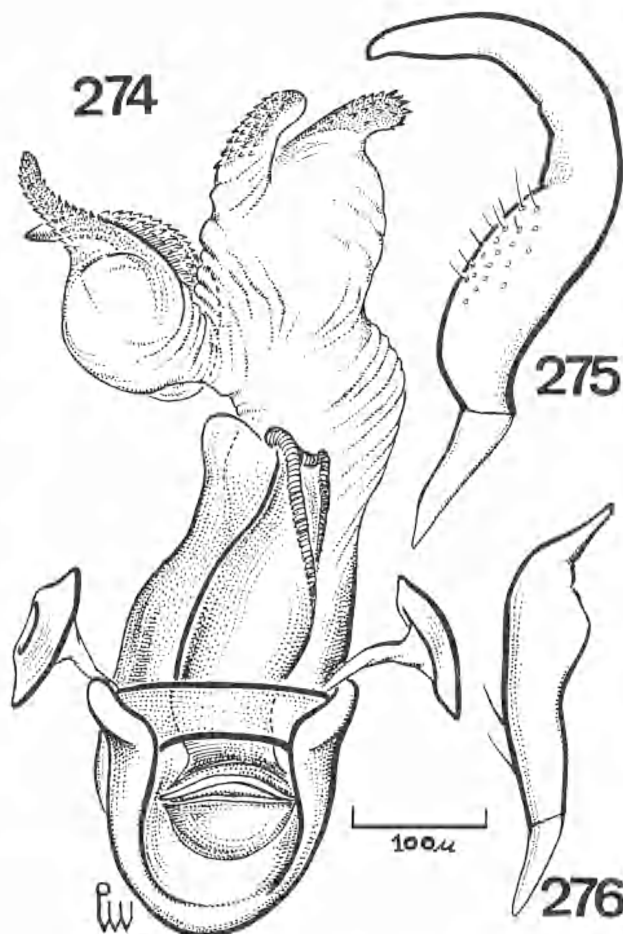
Differs from the two other species in the genus by the colour of the scutellum and membrane.

Onomaus pompeus Distant, 1904

Onomaus pompeus Distant, 1904b, p. 416; Carvalho, 1959, p. 323.

(Figs. 277-280)

Characterised by the large size and colour of pronotum and antenna.



Figs. 274-276—*Onomaus lautus* (Uhler): Fig. 274—Penis; Fig. 275—Left paramere; Fig. 276—Right paramere.

Female: Length 10.2 mm, width 2.6 mm. *Head*: Length 0.7 mm, width 1.2 mm, vertex 0.60 mm. *Antenna*: Segment I, length 2.3 mm; II, 4.0 mm; III, 3.4 mm; IV, 3.6 mm. *Pronotum*: Length 1.6 mm, width at base 2.6 mm. *Cuneus*: Length 1.52 mm, width at base 0.64 mm (lectotype).

General coloration ochraceous to citrine or pale yellow with dark brown and reddish areas; head black with a semilunate wide pale vitta on vertex, antenna uniformly castaneous to dark brown, pronotum dark brown with collar, calli and a central spot on disc anteriorly pale, the latter with a rugose black spot at middle, bordering calli; mesoscutum fuscous, scutellum pale yellow with a median longitudinal vitta which enlarges and also covers the apex, fuscous; hemelytra ochraceous, glassy, transparent, clavus (central area castaneous), a transverse triangular fascia on corium extending outwards to embolium, extreme apex of corium, outer margin of embolium, apex of cuneus, nervures and extrareolar portion of membrane (except pale spot contiguous to apex of cuneus) fuscous to brown. Underside of body with external portion black, spots on coxal cleft I, basilar plate and ostiolar peritreme pale; abdomen and femor reddish (except base and a

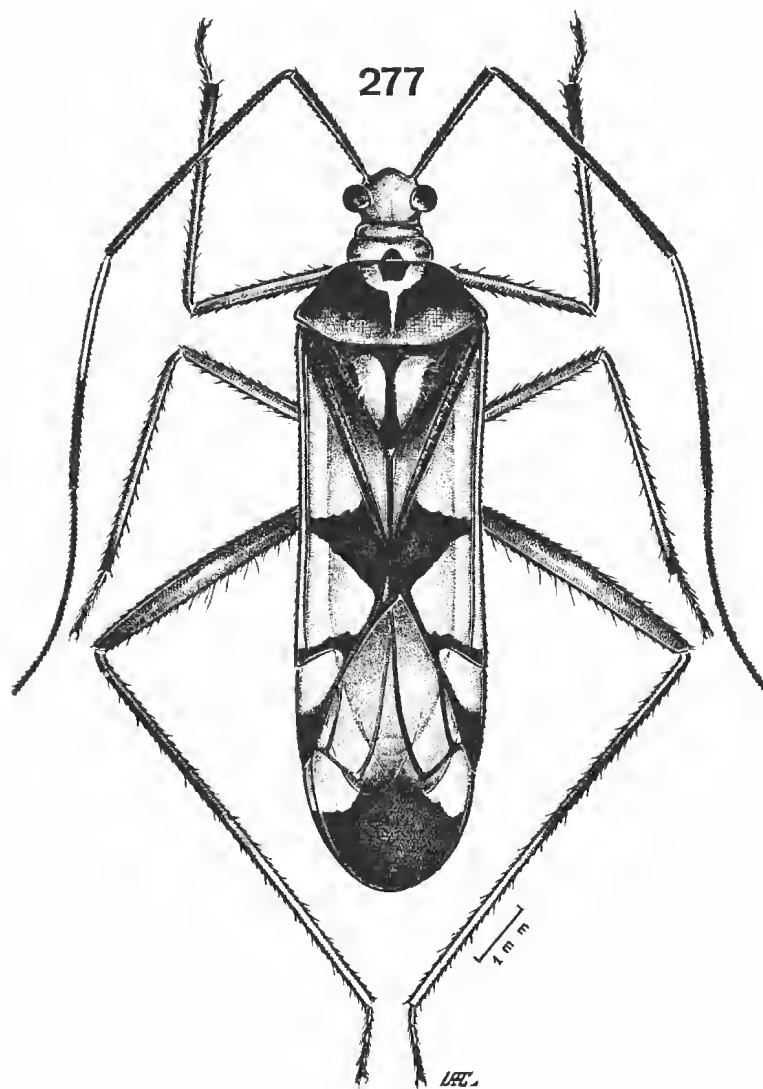


Fig. 277—*Onomaus pompeus* Distant, female, lectotype.

narrow ring at middle), tibiae I and II pale, infuscate apically, tibiae III fuscous on basal half, pale on apical half, segments III of tarsi fuscous.

Male: Similar to female in colour and general aspect, a little less robust.

Genitalia: Penis (fig. 278) with membranous lobes provided with sclerotized teeth apically. Left paramere (fig. 279) falciform. Right paramere (fig. 280) slender apically.

Geographical distribution: Burma.

Specimens studied: female, lectotype (new designation), BURMA, *Onomaus pompeus* distant (BMNH); five males and females, BURMA: Nam Tamai Valley, 29.viii.1938, alt. 3 000 ft., R. Kaulback, B. M. 1938-741; Mishmi Hills, Lohit River, 30.iii.1935, M. Steele.

Differs from others in the genus by its large size and by the colour of pronotum and segment III of antenna.

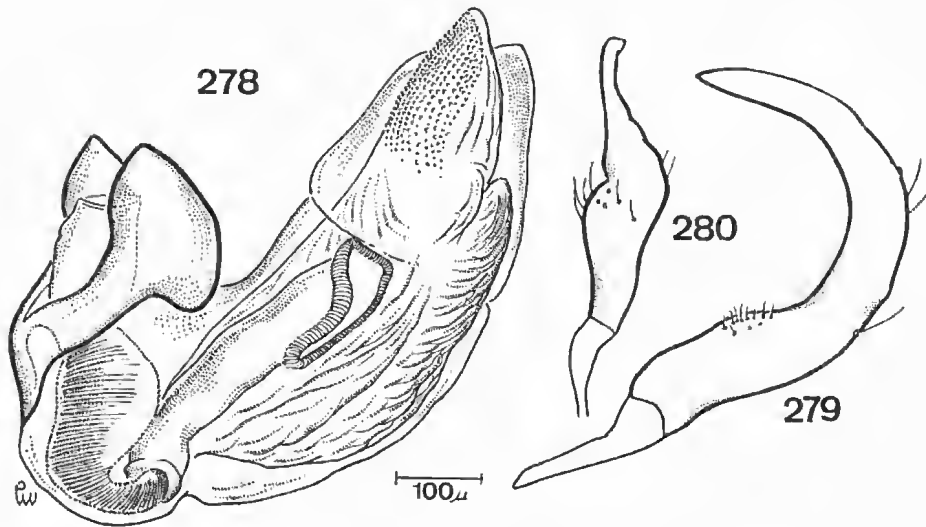
Rambea Poppius, 1912

Rambea Poppius, 1912a, p. 440; Carvalho, 1955, p. 107; Carvalho, 1959, p. 324.

Type-species: *Rambea gracilipes* Poppius, 1912.

Body elongate, clothed with long, erect pubescence. Head inclined, vertex sulcate longitudinally, slightly convex, gula long; eyes far removed from collar, seen from above small and rounded, placed at middle of head, seen from side obliquely ovate, post-ocular portion of head gradually but strongly narrowed; rostrum surpassing apex of posterior coxae; antenna linear, slender, segment II approximately twice as long as first.

Pronotum with disc strongly convex, posterior margin broadly rounded, lateral margins strongly sinuate behind calli, collar with mesal length nearly equal to thickness of first antennal segment, calli confluent, reaching side of pronotum, posterior margin broadly impressed, strongly punctate along



Figs. 278-280—*Onomaus pompeus* Distant: Fig. 278—Penis; Fig. 279—Left paramere; Fig. 280—Right paramere.

the impression together with collar forming an interior lobe about half as long as the posterior lobe; lateral margins and three longitudinal bands of posterior lobe silvery; scutellum triangular, strongly convex before apex, depressed and deeply medially bipunctate.

Hemelytra finely punctulate, semi-transparent, clavus and corium without nervures, claval suture strongly punctate, membrane bicellulate, transparent, inner margin of large areola rounded.

Legs long and slender, tibiae finely spinulose, parempodia divergent towards apices.

This genus differs from others in the tribe by the longitudinal silvery bands of the pronotum and by the long and erect pubescence of body and hind tibiae.

Key to the species of the genus *Rambea* Poppius

1. Second antennal segment with a broad ring beyond basal fourth; pronotum with three pale longitudinal bands on anterior portion of disc *annulicornis* Hsiao
- Second antennal segment unicolorous; pronotum with a single longitudinal vitta 2
2. Disc of pronotum greenish; globose area of humeral angles pale green *gracilipes* Poppius
- Disc of pronotum with a large dark brown spot; globose area of humeral angles with a black spot *malasica* n.sp.

***Rambea annulicornis* Hsiao, 1944**

Rambea annulicornis Hsiao, 1944, p. 373, Carvalho, 1959, p. 324.

(Figs. 281-284)

Characterised by the length and colour of second antennal segment.

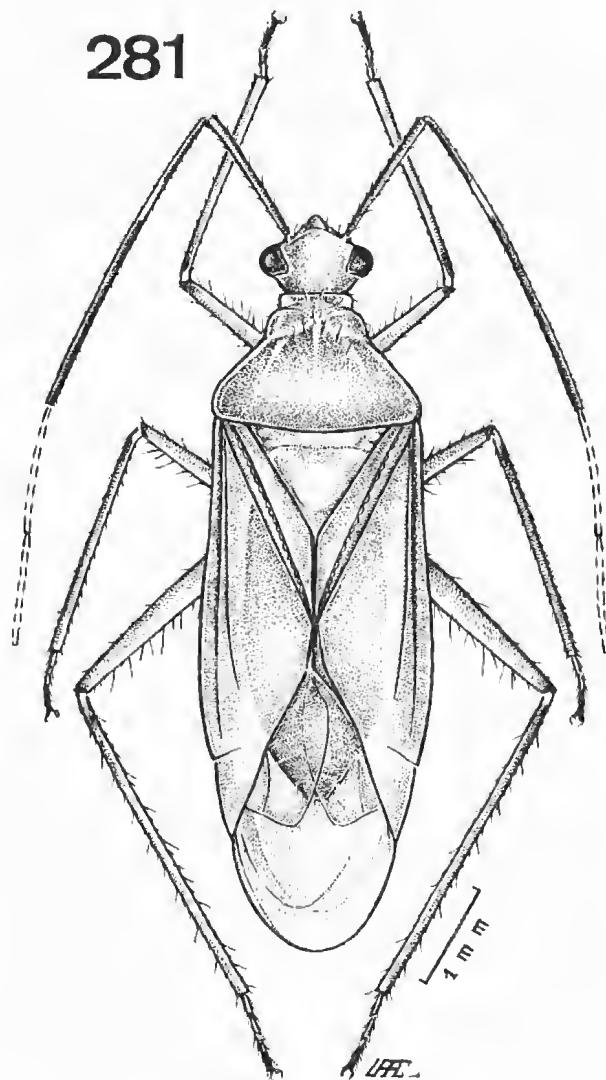


Fig. 281—*Rambea annulicornis* Hsiao, female, holotype.

Male: Length 6.3 mm, width 1.8 mm. *Head*: Length 0.6 mm, width 1.0 mm, vertex 0.50 mm. *Antenna*: segment I, length 1.3 mm; II, 2.8 mm; III, 2.1 mm; IV, 1.2 mm. *Pronotum*: Length 1.2 mm, width at base 1.8 mm. *Cuneus*: Length 0.60 mm, width at base 0.40 mm.

General coloration light greenish to stramineous; lorum and lateral margin of post-ocular part of head fuscous, antenna dark brown, segment I stramineous, a broad ring beyond basal fourth of second segment, basal fourth of third and basal fifth of fourth whitish; pronotum with lateral margins and three longitudinal silvery bands on posterior lobe, seen from side, with a fuscous longitudinal line along the anterior half of lateral margin; hemelytra semi-transparent, emboliar margins narrowly fuscous, membrane transparent. Underside of body pale yellow, legs pale, base of tibiae white, extreme apex of femora, a narrow sub-basal ring of tibiae and third tarsal segments fuscous.

Morphological characters as mentioned for genus, pubescence long and erect, especially on pronotum, scutellum and base of hemelytra.

Genitalia: Penis (fig. 282) with membranous lobes provided with apical papillae. Left paramere (fig. 283) falciform. Right paramere (fig. 284) small, pointed apically.

Male: Similar to male in colour and general aspect.

Geographical distribution: Philippines.

Specimens studied: holotype, female, PHILIPPINES: Mt. Maquiling, Luzon, Philippines Islands (bakcr), *Rambea annulicornis* Hsiao (U.S.N.M. no. 56718). *Allotype and Paratypes*: Same data as types.

Differs from *Rambea gracilipes* Poppius, 1912 by the presence of a pale ring on the second antennal segment.

Rambea gracilipes Poppius, 1912

Rambea gracilipes Poppius, 1912a, p. 440; Carvalho, 1959, p. 324.

(Figs. 285-288)

Characterised by the colour of second antenna I segment.

Male: Length 4.6 mm, width 1.6 mm. *Head*: Length 0.5 mm, width 0.9 mm, vertex 0.40 mm. *Antenna*: Segment I, length 1.4 mm; II, 2.4 mm; III-IV, broken. *Pronotum*: Length 1.0 mm, width at base 1.4 mm. *Cuneus*: Length 0.70 mm, width at base 0.28 mm (lectotype).

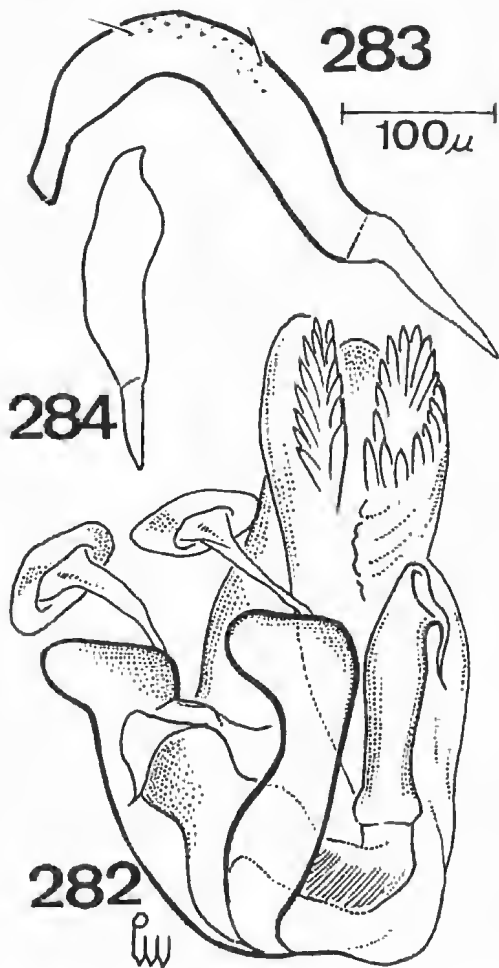
General coloration light greenish to pale yellow; head, collar, a longitudinal vitta at middle of disc, lateral margins, humeral angles, scutellum and underside of body whitish; base (on each side) and apex of clypeus, neck behind eye, lower margins of calli, a spot on humeral angles and an equivalent one laterally, as well as a spot on each side of base of abdomen fuscous to black; hind margins of calli, spots on each side of longitudinal pale vitta of disc, base and apex of cutellum, commissure and apex of clavus, inner and outer margins of embolium, outer margin of cuneus and nervures of membrane fuscous to brown, legs pale yellow.

Morphological characters as mentioned for genus.

Genitalia: Penis (fig. 286) with membranous lobes ended by papillae. Left paramere (fig. 287) falciform. Right paramere (fig. 288) small, simple.

Female: Similar to male in colour and general aspect. Length 6.0 mm, width 1.7 mm, vertex 0.40 mm.

Geographical distribution: Sumatra.



Figs. 282-284—*Rambea annulicornis* Hsiao: Fig. 282—Penis; Fig. 283—Left paramere; Fig. 284—Right paramere.

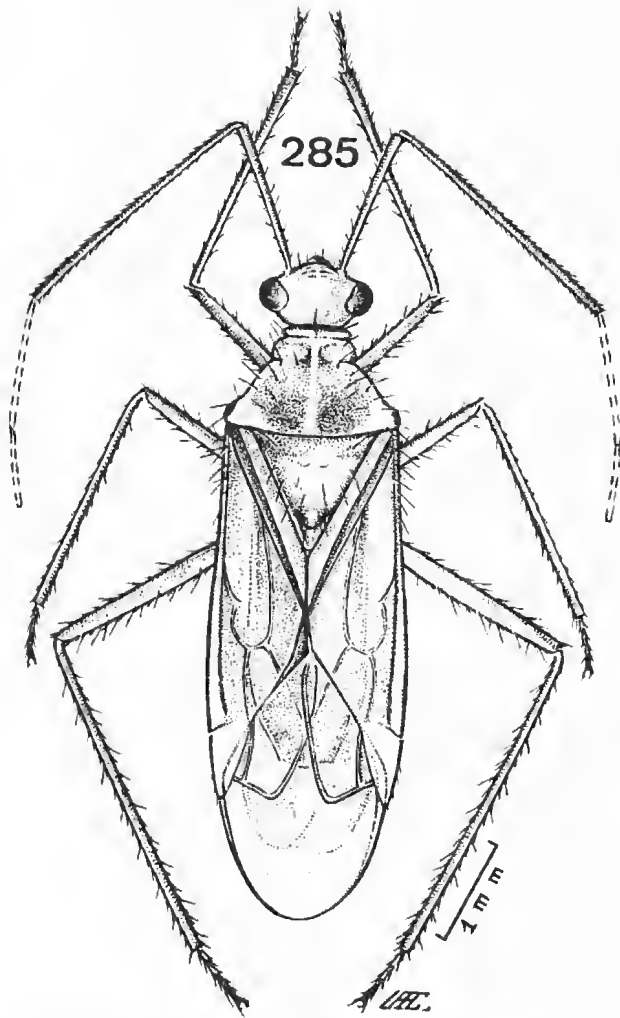


Fig. 285—*Rambea gracilipes* Poppius, male, lectotype.

Specimens studied: male, lectotype (new designation); INDONESIA: Si-Rambec, Sumatra, xii.1890, iii.1891, E. Modigliani (*Rambea gracilipes* Poppius) (HELSINKI); paralectotype, same data as male.

This species differs from *Rambea annulicornis* Hsiao, 1944 by the unicolorous second antennal segment and by the single longitudinal vitta on pronotum.

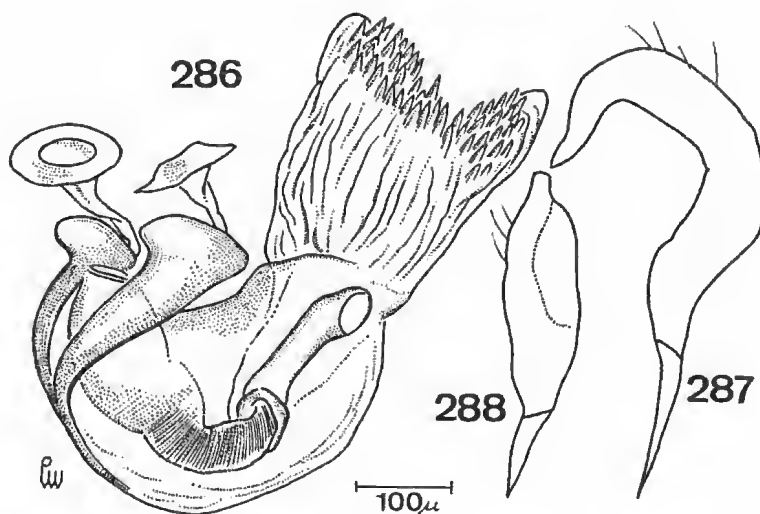
***Rambea malasica* n.sp.**

(Figs. 289-292)

Characterised by the colour of pronotum and sternal area.

Male: Length 5.3 mm, width 1.4 mm. *Head*: Length 0.5 mm, width 1.0 mm, vertex 0.44 mm. *Antenna*: Segment I, length 1.5 mm; II, 2.6 mm; III, 1.9 mm; IV, ? mm. *Pronotum*: Length 1.2 mm, width at base 1.5 mm. *Cuneus*: Length 0.52 mm, width at base 0.28 mm (holotype).

General coloration pale greenish to pale yellow with brown and black areas; head pale, eyes brown, vitta on neck behind eye, jugum, lorum and gena fuscous; antenna fuscous, segment I and base of II pale; pronotum with area on lower lateral margins of calli and humeral angles black, collar with a median and two lateral fuscous bars anteriorly, a transverse fascia behind calli and a large V-shaped mark on disc, brown to dark brown, within the arms of the V-shaped mark and also humeral angles pale, the surface of disc around brown area with silvery pruinose colour; mesoscutum brown, scutellum pale



Figs. 286-288—*Rambea gracilipes* Poppius: Fig. 286—Penis; Fig. 287—Left paramere; Fig. 288—Right paramere.

with a fuscous preapical spot; hemelytra ochraceous, transparent, apex of corium, an obsolete transverse fascia on corium level with apical one fifth of clavus, corial commissure fuscous, nervures of membrane dark, the latter transparent. Underside of body pale yellow, a black spot above coxal cleft I and another on ostiolar orifice, legs pale yellow tending to fuscous on apices of femora.

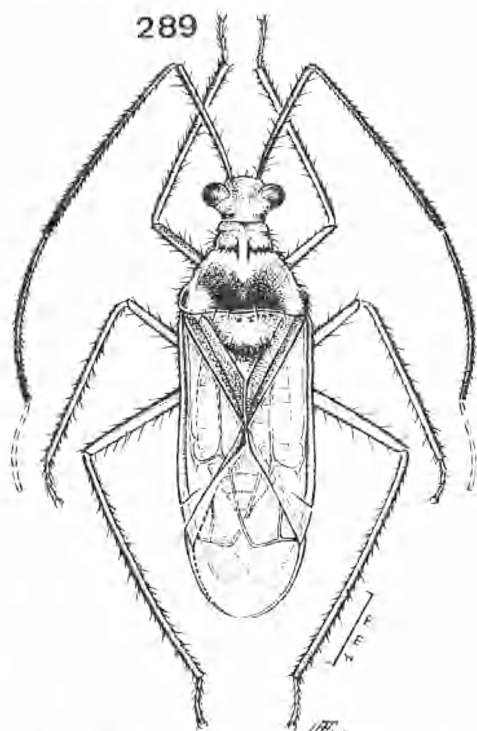


Fig. 289—*Rambea malasica* n.sp., male, holotype.

Genitalia: Penis (fig. 290) with vesica provided with two spiculi with minute sclerotized teeth, Left paramere (fig. 291) falciform, as seen in figure. Right paramere (fig. 292) slender, with acute apex.

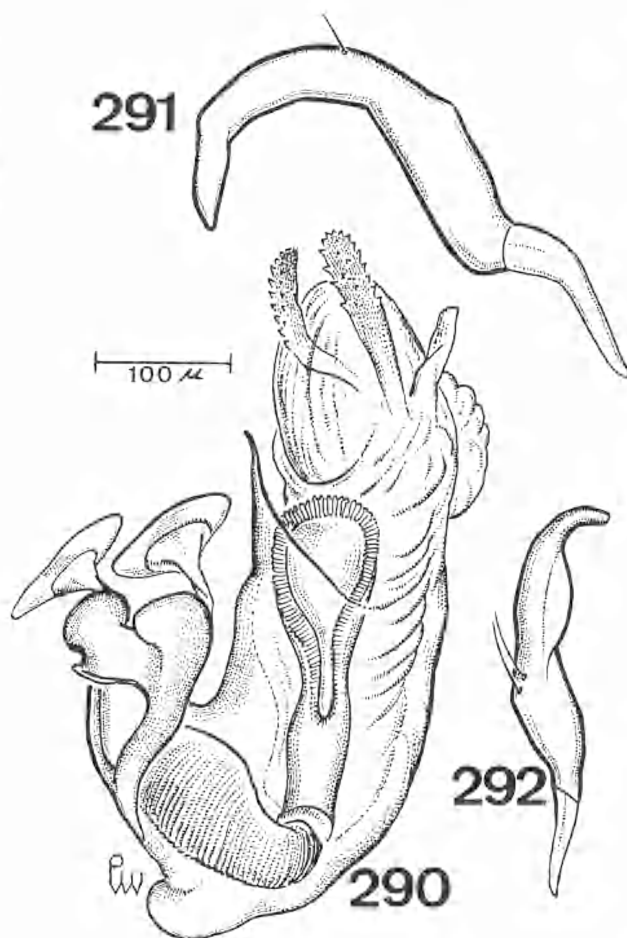
Female: Unknown.

Holotype: male, PENINSULAR MALAYSIA: Pahang, Gua'Ghe Yatim to Terrenggan, 17, xii, 1951, L. W. Quate (BMNH).

Differs from *Rambea gracilipes* Poppius by the colour of the pronotum.

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Figs. 290-292—*Rambea malasica* n.sp.: Fig. 290—Penis; Fig. 291—Left paramere; Fig. 292—Right paramere.

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